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PUBLISHERS' NOTE.

THIS work is a portrayal of the World and its peoples as they are. The life activities, achievements, and progress of all mankind are here chronicled. Space in text and photographic reproduction is given to every country, and to each in proportion to its importance.

While the volume has for its characteristic and chiefly important feature a profusion of illustrations, yet these owe no small part of their strength to being accompanied by an admirable system of new maps, covering the entire world. In addition to this up-to-date charting of the globe and the photographic illumination of the text, this work possesses those other prime essentials—vivid description and clear setting-forth of history and legend.

If, as the proverb has it, "the proper study of mankind is man," then surely extended study of the earth's inhabitants, accurate knowledge, both of the upward struggle of the races and of the scenes of their activities, are to be desired. In such study this book is designed to aid.

The guiding purpose in the preparation of the text has been simply to make the book useful to every one who reads and thinks. The maps which supplement the illustrated text and round out the volume to completion afford an adequate representation of all the geographical and political divisions of the earth. They have been prepared especially for this work, and embody the very latest information as to recent explorations, discoveries, and territorial readjustments. The whole goes to make up a volume in which, it is believed, not only every American citizen, but the intelligent readers of every land, will find unusual interest and instruction.

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THE TOWER BRIDGE ACROSS THE THAMES AT LONDON

The bridge that spans the Thames just below the Tower of London is a beautiful example of modern civil engineering. It was completed in 1894 after eight years of work and an expenditure of $6,000,000. The structure rests upon two massive stone piers which stand near the center of the stream, about 200 feet apart. Two great stone towers rise on these piers and serve as anchoring places for huge cables which support suspension bridges extending to either shore. These bridges, each nearly 300 feet long, are calculated to bear without strain the heaviest burden that can be imposed upon them by the enormous traffic of the city. The graceful curves of the immense steel cables hardly hint at the gigantic strength here placed at the service of commerce. Between the stone towers extend two highways. One is a drawbridge that opens to allow the passage of river traffic; the other, 110 feet above it, is for the use of pedestrians when the drawbridge is open.

ENGLAND AND WALES

ENGLAND AND WALES comprise that part of the United Kingdom lying south of the boundary between England and Scotland, formed by the River Tweed and the Cheviot Hills. It is a long, irregular-shaped section, with a rugged and deeply indented seacoast, embracing an area of 58,309 square miles. The British Isles, which compose the United Kingdom, number over 5,000, although the large majority of them are little more than mere masses of bare rock, and in fact only two of them are of much geographical importance. These are Great Britain and Ireland. They lie between the Atlantic Ocean and the North Sea, being separated from the main portion of the Continent of Europe by the English Channel, between England and France. Ireland lies west of Great Britain, divided from it by the Irish Sea, and has an area nearly two-thirds that of England. In form and contour the two islands are radically unlike.

KING EDWARD VII.

Edward VII., King of Great Britain and Ireland, and Emperor of India, succeeded to the throne on the death of his mother, the late Queen Victoria, in January, 1901. He was then in the sixtieth year of his age. His wife, Queen Alexandra, is a daughter of the King of Denmark.

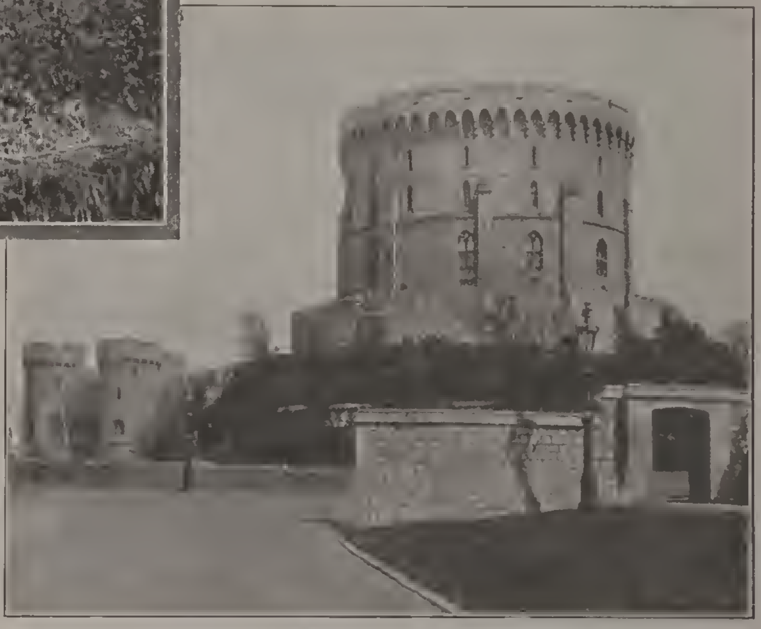
That the British Isles once formed a part of the European mainland is a well demonstrated fact. At a distance of about 180 miles west of Ireland the bed of the Atlantic Ocean descends abruptly to a depth varying from 7,200 to 9,000 feet, while within this line, to the eastward, the water suddenly shoals to a comparatively slight depth, the sea-bed around the coasts of the British Isles ranging from 300 feet near the English Channel to seventy feet in the North Sea, between England and Germany. This deep sea-bed marks the ancient western coast-line of Europe, the submerged platform of the great submarine shelf bordering it on the east, from which rise the British Isles, once forming a part of the Continent. This platform, in fact, constituted the western extremity of the Great Plain of Northern Europe, which includes nearly the whole of Russia, the greater part of Germany, and all of Denmark and the Netherlands.

WINDSOR CASTLE

This castle has been for centuries the chief residence of the English sovereigns. A stone fortress was built on its site by William the Conqueror. The present structure was begun by Edward III. about 1343, and has been added to by a number of subsequent rulers. Improvements and changes begun under George IV. were finished during Victoria's reign. As a whole, it is one of the most beautiful of English castles.

Geological Structure. Broadly speaking, England is divided into two contrasted regions by the main divide or watershed, which passes through the center of the country from north to south, the line of the divide for over half its length being the crest of the Pennine Range, which extends due south from the Cheviot Hills to the Peak of Derbyshire. The western and smaller part, characterized by lofty hills and bold and rugged scenery, is the region of older structures and more complicated geological forms. From this region of primitive rocks rugged Snowdon rises, —3,570 feet—the highest mountain in Wales. In contrast to this, the eastern section presents a country of low hills, undulating downs, and broad and fertile river valleys, the region of younger structures and more simple geological forms. To the western region belong the Lake District, with the great stretch of carboniferous beds from Northumberland to Derbyshire, and Wales, with the small midland carboniferous district (Staffordshire) and the broken plain of Hereford; while to the east are the chalk downs, the limestone country, the Fenland, and the Basin of the Thames. A secondary divide extends from east to west along the uplands of Southern England. It follows an extremely irregular course across the Downs, Salisbury Plain, Exmoor, Dartmoor, and the Heights of Cornwall, the streams of the southern watershed falling into the English Channel, those north of the divide into the Bristol Channel and the Thames Estuary.

The Coast-line. In proportion to area few countries have a greater extent of coast-line than England, while, with the exception of Greece, no other country in the world has an outline so varied and irregular as that of Great Britain. In a straight line the shores of England measure about 1,500 miles, but these are so deeply indented and cut by numerous bays and inlets of the sea that the total length of the coast-line is nearly doubled. There are a large number of fine harbors, and many of the bays and estuaries penetrate far inland. A long extent of shore-line like that possessed by England is constantly undergoing changes and alterations. In some instances the sea encroaches upon the land and in others the land gains upon the sea. This is apparent upon the



ROUND TOWER, WINDSOR CASTLE

The Round Tower or Keep, at Windsor Castle, was built by Edward III., who held two sovereigns in durance there—David II., of Scotland, and John II., of France. Another royal prisoner—James I., of Scotland—(confined in this tower by King Henry V.) from his prison window first saw and loved Lady Jane Beaufort as she walked in the garden below. Later, he wooed the lady and took her back to Scotland as his queen.

English coast at Romney Marsh, in Kent, which has an area of 24,950 acres, and formerly constituted an arm of the sea. This tract once formed a roadstead where vessels laden with produce rode at anchor and discharged cargoes at ports now no longer in existence. So, also, the wide sea channel that connected the Stour River with the Thames Estuary, making an island of Thanet, and through which large ships once passed, has entirely disappeared, leaving Thanet united to the mainland. The same work of reclamation is going on from Cambridge to the Wash—an arm of the North Sea which extends between Lincolnshire and Norfolk. Here the Fen country has been transformed from a marshy wilderness into firm and productive land. On the southern coast-line the encroachments of the sea are not only marked but recent. Ravenspur, in Yorkshire, where Henry IV. landed in 1399, is now entirely submerged. Eccles-by-the-Sea, Cromer, and other ancient ports in Norfolk have met the same fate.

Mountains and Lakes. The mountains of England consist of four distinct groups: The Pennine Range, called the backbone of England, a vast succession of moorland interspersed with mountain masses, the highest point, Cross Fell, 2,892 feet; the Cumbrian Hills to the west of the Pennine Chain; the Welsh Mountains, a region of wild moorland broken by mountain masses, abounding in scenery of extreme grandeur and boldness; and the hills and highlands of Devon and Cornwall. The Cumbrian Mountains are somewhat loftier than the Pennines, and contain the highest elevation in England, Scafell Pike, 3,210 feet; Helvellyn, 3,118 feet, and Skiddaw, 3,054 feet, also belong to the group.

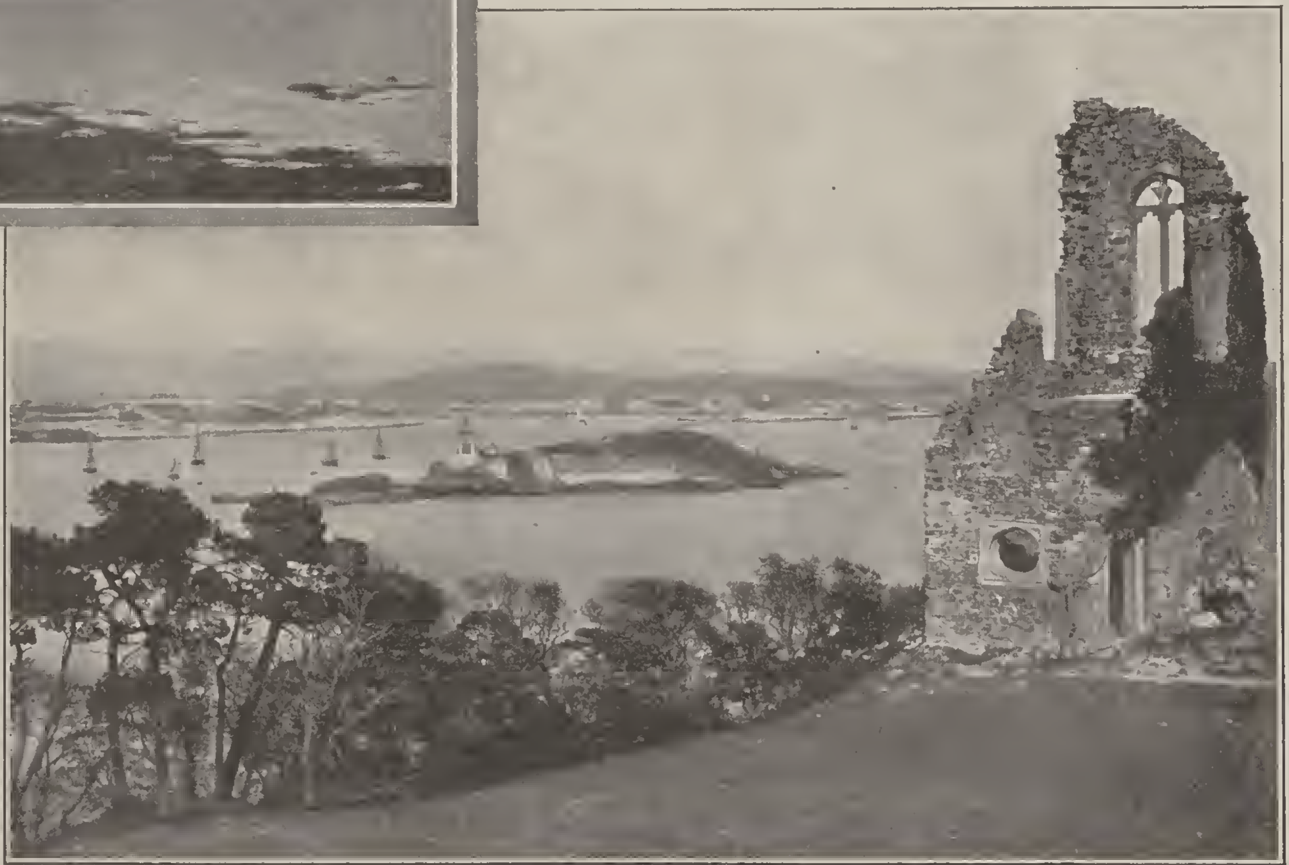
ST. MICHAEL'S MOUNT

The rocky isle, 230 feet high, known as St. Michael's Mount, near Penzance, on the southwest coast of England, takes its name from the legend that the archangel Michael once appeared to hermits dwelling there. Older local tradition says that the Giant Cormoran, slain by Jack the Giant Killer, had his home on this forbidding eminence. A ridge, bare at low tide, connects the island with the shore.

Within this mountain region lies the beautiful "Lake District," which has become famous in the literary history of England. These lakes, each shut in a narrow wooded valley, are situated mostly in the counties of Cumberland, Westmoreland, and Lancashire. The largest of the lakes is Windermere, it being ten miles long with an area of a little more than five and a half square miles. Under the heights of Scafell Pike lies Wastwater, the deepest of the lakes. The curious physical feature of this Lake District is delineated by Mill, who says: "It may be described roughly as a circular mass of elevated land, highest in the center, and furrowed by a series of valleys, mostly containing long, narrow lakes of considerable size, running from the center toward the circumference, like the spokes of a wheel."

Rivers and Plains. The mountains of England give direction and character to its rivers. The elevations being in the west, the rivers, with few exceptions, flow from them in an easterly direction. Surrounded by oceanic waters it is natural that England should have both a humid atmosphere and a comparatively large number of streams. Although England has, it is claimed, more than 500 so-called rivers, none of these are very large, or, owing to the limited area of the country, of any considerable length, and not more than fifty can be called navigable streams. The four important streams are the Thames, the Humber, the Severn, and the Mersey, all deriving their importance mainly, if not entirely from the fact that they are arms of the sea. The principal stream, the Thames, upon which the city of London is situated, drains an area of 6,160 square miles, with a total course of over 200 miles. It has numerous tributaries and is of vast commercial importance. While the tide reaches to Teddington, ninety-three miles from London, yet constant dredging is required to preserve at London a channel navigable for large vessels. Next in importance, from the extent of their drainage, are the Trent and the Ouse, which unite to form the Humber River, or Estuary. They afford drainage for 9,550 square miles, or about one-sixth of England. Four considerable streams, with their tributaries, flow into the Wash—the Witham, the Welland, the Great Ouse, and the Nen, draining 5,896 square miles of territory. These are the principal streams flowing to the east and are the most important where the question of drainage alone is concerned, but there are several rivers flowing from the east to the west which have a great importance industrially and commercially. The first of these, the Severn, drains an area of 4,350 square miles. Next is the Mersey, which drains 1,000 square miles, following which is the Eden, affording drainage for more than 900 square miles of territory.

England has five systems of plains or areas of low territory lying between mountains or uplands. The most extensive of these is the one which entirely crosses the country, one end touching on the North Sea, to the north of the York Moors, while the other is bordered by the Irish Sea, between the Welsh and Cumbrian mountains. Rivers divide this plain into three parts, known as the Plain of York, or the Valley of the Ouse; the Central Plain, or the Valley of the Trent; and the Plain of Cheshire. The second plain forms a long belt of broken and disordered country running in a northeasterly direction to the shores of the Wash, and is the district of the Fens. The third plain is the basin of the Thames, while the fourth is inclosed between the steep escarpments of the North and South Downs, and is called the Weald. There is a small plain lying on the southern coast called the Plain of Southampton.



DRAKE'S ISLAND, PLYMOUTH HARBOR

Plymouth Sound, off the town of that name on the south coast of England, is three square miles in extent. About the middle of the harbor lies a small island, strongly fortified, called St. Nicholas or Drake's Island. From Plymouth Sir Francis Drake set out on his famous "round the world" voyages, and after his return served as mayor of the town and represented it in Parliament.

Wales. In its geological structure Wales differs from England, of which it is now politically a part. It is more mountainous than much of England, and as in that country the mountains lie near the western coast, the line of the divide, which marks the water-parting, extends down the country from north to south, and the great bulk of its streams are to the eastward. But the mountains of Wales are

loftier than those of England, its scenery is bolder and more rugged, and the rocks and slates of which it is built up are of an earlier geological period. Besides Snowdon, there are several peaks that reach an altitude of over 3,000 feet; among them are Carnedd Llewellyn (3,482) and Carnedd Dafydd (3,430).

SHAKSPERE'S BIRTHPLACE

The ancient house in which Shakspere was born, April 23, 1564, still stands in Stratford-on-Avon. It has recently been restored so far as possible to its former condition.

The rivers are divided into two distinct groups, the streams to the west of the divide, or water-parting, falling into the Irish Sea, and those to the eastward, far greater in importance and extent, into the Bristol Channel. The principal rivers of the Irish group are the Dee, Clwyd, Conway, Dovey, Ystwith, and Teifi; of the Bristol Channel the Taff, Towy, Neath, Tawe, Wye, and Usk, and the Severn, which has its upper course in Wales. These rivers are all short and are navigable only for small boats or barges. Wales has many tarns or lakes, the largest being Lake Bala, in Merioneth, which is less than four miles in length.

SHAKSPERE MEMORIAL THEATER

This theater, on the banks of the Avon, was opened April 23, 1879. It was erected for the purpose of annually celebrating the poet's birthday by a series of Shakspearean representations.

Climate. The climate of Great Britain, moderated and equalized by insular conditions, is much milder than that of any other country in the same latitude in Europe or America. The most potent influence exerted is that of the Gulf Stream drift, which tempers extremes of heat and cold and largely determines the rainfall. The warm waters of this great Atlantic current, flowing northward from the Caribbean Sea and the Gulf of Mexico, reach the coasts of Southwest England and Southern Ireland, covering the land with an atmosphere charged with warm vapors which are frequently precipitated in rain. In the central portion of the British Isles the mean temperature for the year is 49° 7′; summer, 60° 8′; winter, 39° 5′. In London the mean temperature of summer is 63° 8′; of winter 37° 3′. The mean annual temperature is 50° 55′. The prevailing winds are from the southwest, and naturally the heaviest rainfall is on the western coast, which has also a higher temperature than the border-land of the eastern coast. The little village of Seathwaite in Lancashire, with an annual rainfall of 130 inches, shows the highest record, whereas the average for England is about thirty-six inches. The average annual rainfall at London is twenty-four inches; at Liverpool thirty-five inches.

The climate of England is admirably suited to various kinds of industry, and Charles II. expressed a good deal of wisdom when he said he thought "that the best climate where he could be abroad in the air with pleasure, or at least without trouble or inconvenience, the most days in the year and the most hours in the day; and this he thought he could be in England more than any other country in Europe."

Agriculture. In England, with an area of 32,346,000 acres, 76 per cent of the land is under cultivation or in permanent pasture, while in Wales, with an area of 4,774,000 acres, only 59.3 per cent is so occupied. The districts of England devoted more especially to agriculture are in its eastern and southern sections. In the northern, north middle, and western counties agriculture takes chiefly the direction of stock-raising, and this is true of all of Wales. Oats, barley, wheat, and rye are the cereals grown; oats are raised within the district of the Fens and in the north, and barley is cultivated in the eastern and midland counties, the wheat area being in the south-eastern counties. Hops are produced chiefly in Kent, Worcester, Hereford, and Surrey counties. Potatoes are grown largely in Lancashire, Cumberland, and Cheshire; hemp and flax in Lincoln and Suffolk counties. Of the fruits, apples are raised to a considerable extent in Hereford and Devon counties; small fruits, like plums, pears, gooseberries, etc., are produced abundantly, and market-gardening is an extensive industry near all cities and large towns. As to live stock, sheep are reared and kept upon the hill pastures, while cattle are fed on the rich lands of the plains and in the regions of abundant rainfall. Horses are bred in large numbers and hogs are common in all the districts. Dairying receives a large share of attention. Notwithstanding the large area in England and Wales that is devoted to the various branches of agriculture, only a very small part of the food supplies consumed by the people is grown at home.

Mining and Coal-fields. The mining of coal and iron ore and the reduction of the latter, by means of the former, to an article of commerce, are so closely identified that they have become practically one industry. When the Romans had subdued a portion of the island they utilized the Cornwall tin, the Pennine lead, and the common bog-iron ore. Charcoal was the only fuel then employed in the reduction of these ores, and hence the rude smelteries were placed in regions adjacent to the large timber areas. Nature and necessity located these works, then occupying the region known

ANNE HATHAWAY'S COTTAGE

At Shottery, one mile west of Stratford-on-Avon, the home of Anne Hathaway is still standing in substantially the same condition as when Shakspere courted his future wife there. It was bought and given to the nation in 1892.

as the Black Country, in the forests of Arden, the center of which was the present site of Birmingham and Wolverton, and it still remains the pivotal point of the iron industries of England. Collieries were opened in Newcastle during the reign of Henry III., in 1238, and soon after coal received recognition as an article of commerce. The coal trade steadily increased, but evidently the coal was used mainly for heating houses and for smiths' work, for the chief fuel in the 14th century was wood and charcoal, and the rise of the iron industry in the 16th century was based upon wood, the fuel being charcoal and not coal. In 1740 the Dudley process for reducing ores by the employment of coal came into use, and with it began England's supremacy in the iron trades of the world. The building of railroads, which became important in 1840, created a still larger demand for iron, as well as a demand for improved and cheaper processes in the reduction of the ores, both of which British capital and ingenuity supplied.

There are five leading coal areas located in England and Wales: The Northern coal-fields in Northumberland and Durham, furnishing supplies chiefly for the engineering works at Newcastle and for export to Scandinavia and the Baltic; the Yorkshire coal-fields on the eastern slope of the Pennine Range, between the Aire and the Trent, including East Riding, Nottingham, and Derbyshire, important mainly for the works and factories at Leeds and Sheffield; the Lancashire coal-fields on the west side of the Pennines, the product used wholly in the cotton factories adjacent to Manchester; the Staffordshire coal-fields, supplying principally the various industries in the region of which Birmingham is the center; and the South Wales coal measures reaching into the county of Monmouth. The latter supplies the great ore-reducing works at Cardiff, Merthyr Tydfil, and Swansea, but the coal being chiefly anthracite, fully one-half of the output is exported, for use on steamers, to many parts of the world. The average output of these coal measures since 1897 has been over 175 million tons annually. The production of coal is chiefly in the hands of three nations—American, British, and German. Previous to 1875 Great Britain produced over three times as much coal as either the United States or Germany, but since that time there has been a remarkable gain in the United States, and while the production of the United Kingdom is advancing rapidly, its absolute increase is less than that of the United States, while its relative or proportional increase is considerably less than either that of Germany or the United States. In fact, by 1899 Great Britain had lost her pre-eminence as a coal producer, the United States taking the lead.

HIGH STREET, RUGBY

TURRET OF DR. ARNOLD'S HOME

Rugby, Warwickshire, is celebrated for its boys' school, which was especially famous under Dr. Thomas Arnold, Head-Master from 1828 to 1842. Rugby is the scene of "Tom Brown's School-days," by Thomas Hughes.

FIVES' COURT, RUGBY SCHOOL

WARWICK CASTLE

This is the best preserved feudal castle in England. Ethelfleda, daughter of Alfred the Great, chose the beautiful site upon the Avon, and here, so legend says, Guy of Warwick passed his boyhood as esquire to the Earl. In more recent times, the fame of the castle rests upon its stout defense by Cromwell's men.

Iron and other Minerals. In nearly all the coal-fields iron ore exists in enormous quantities, and, next to coal, it has been the most important source of the wealth of England. Deposits of iron exist in very many of the counties of England and Wales, although the principal mining areas are in the northern and western counties, and in all the various districts that contain coal, the union with which greatly enhances the industrial value of the iron ore. As early as the latter part of the 17th century John Norden wrote, "I have heard that there are, or recently were, in Sussex neere 140 hammers and furnaces for iron." William Camden, writing about the same time, says that Sussex "is full of iron mines, in sundry places, where, for the making and founding thereof, be huge furnaces on every side, and a huge deal of wood is yearly burnt." The destruction of the large forests in England terminated the old methods of reduction about the middle of the 18th century, when "pit-coal" came into use. However, Great Britain, although she formerly was the largest producer of iron in the world, has recently been compelled to yield the first place to the United States.

Tin ranks next in value to iron. It is found only in the counties of Cornwall and Devonshire, the former furnishing by far the largest portion of the metal. But the tin-mining industry is declining, as is shown by government returns, and as it falls off, the imports of the metal have increased. Next in importance to tin, as a metal product of England, stood lead, but this industry is becoming quite insignificant, for England can purchase lead far cheaper than she can produce it, since it is a by-product of so many large mining fields in other countries. Other ores of copper, zinc, gold, and silver are not of importance in contributing to the trade or industry of England and Wales. In fact, many of the metal industries of England have been declining for years, and a recovery of her lost position is now regarded as improbable.

The clays of the four southwestern counties—Cornwall, Devon, Dorset, and Somerset—are of great value. In Staffordshire there is a locality known as the "Potteries," which has made that county one of the richest and most populous of England. The salt mines of the country are sources of great wealth. The principal salt district is in Cheshire, large quantities being obtained at Northwich, Middlewich, and Winsford. Great Britain is the leading exporter of salt to the United States, furnishing 50 per cent of all the salt imported by that country.

Manufacturing. The extent of England's textile industries is best indicated by the amount of raw material consumed in the manufacture of the finished product of her mills. The present import of cotton fiber is tenfold what it was eighty years ago. Fully two-thirds

of the wool used in the many factories of the United Kingdom is brought from Australia. Other textile industries include silk, linen, hemp and jute, hosiery, lace, and shoddy factories. These industries have been the results of years of unrestricted trade, ample capital, and resistless energy.

Few industries are more important to England or the British Empire than shipbuilding. It has become the mainstay of Great Britain's iron industry, and upon it depends the maintenance of her merchant marine and her navy. Doing a very large percentage of the world's carrying trade on the high seas, shipbuilding became one of the prime necessities of her people. The ships built in British yards aggregate each year nearly three-fourths of the gross tonnage built in the shipyards of the whole world.

The fisheries of England and Wales employ a vast number of men and a large amount of capital. Over three-fourths of the products of this industry is landed on the east coast.

Commercial. In agriculture and mining were laid the foundations of England's wealth, and building upon these, she secured a high place in the province of manufactures. Next, by aid of her well-provided marine, she began to open the channels of commerce for the exchange of her products, and the growing output of her factories.

Until about the middle of the 19th century the agricultural produce of the country was nearly sufficient for the food supply of the people, but with the advent of steam-power came improvements in machinery and in means of international communication, through which the imports of raw materials rapidly increased and the cost of foreign foodstuffs was cheapened. English farmers could no longer compete with foreign-grown grain, and in time thousands of agricultural laborers were compelled to turn to the great manufacturing centers for employment. To-day Great Britain exceeds all other countries in the world in the importation of food products, and cut off from a foreign food supply the reserve of breadstuffs and provisions in the United Kingdom would not suffice for a month.

STONEHENGE

Stonehenge, on Salisbury Plain in Wiltshire, is a remarkable pile of huge stones, which apparently were once placed in the form of two concentric circles and two inclosed ovals, with a large stone, probably an altar, in the center. It is believed to be the ruins of a Druidic temple. The doubtful question of its age has been recently settled. In digging a hole in which to set upright again a fallen block, stone implements mixed with metal ones were found, showing that the stones were set up when the stone age was passing into that of bronze, about 2000 B. C.

Of the enormous sum which represents the value of foreign goods yearly imported into the United Kingdom — over $2,000,000,000—fully one-half is paid for articles of food and drink, and the bulk of the other half goes for raw material for factories and shipyards. The value of domestic exports is about three-fifths of that of imports and nearly all of this represents manufactured or partly manufactured articles. The nearest approach to the high figures of British commerce is made by the United States, but even the enormous foreign trade of that country falls below the trade of the United Kingdom.

OLD BRIDGE, CROWLAND, ENGLAND

In the ancient town of Crowland, Lincolnshire, England, there is a curious triangular bridge, spanning the place where two small streams flow into the Welland River. It has three pointed archways that meet in the middle, giving three watercourses and three roadways. Each arch has three stone ribs, and the nine meet in the center. This bridge dates back to the 14th century.

BEAULIEU ABBEY

Beaulieu Abbey, near Southampton, England, was founded by King John in 1204. Of the ancient buildings there now remain only the ivy-covered gateways and gatehouse, the refectory, and the Abbot's lodging. The last-named building, restored, is now the residence of Baron Montagu. The refectory has been converted into a church.

The largest part of Britain's trade is, first with her colonial possessions as a whole; and secondly, with the United States from which she buys heavily of foodstuffs. England also draws upon the Argentine Republic, Canada, and Russia, for her supply of wheat and flour.

To carry on her large commerce, England has several important canals, a very complete system of railways, and a merchant marine that is without an equal in the world.

Historical. The aboriginal inhabitants of Britain appear to have been a short, dark, non-Aryan race, akin to the Iberians of Spain. Later Celtic tribes invaded the country and drove the Iberians into the mountains of Wales. Little, however, that is authentic was recorded of the island before the invasion of Julius Cæsar in 55 B. C., and the later subjugation of the country by the Romans. In 43 A. D., Southern Britain was conquered and became a Roman province. By the year 84 A. D. the Romans had carried their arms as far north as the Firths of Forth and Clyde, between which they erected a chain of forts. But from this point they were gradually driven back, and early in the 5th century the last of the Roman legions were withdrawn, leaving the Romanized and Christianized Britons defenseless against the warlike incursions of Picts and Scots. Then came the real founders of the Kingdom of England, the Angles and Saxons. First they lent their assistance to deliver Britain from her northern foes, and afterward turned their arms against the Celts themselves, drove them into the fastnesses of Wales, and became masters of the country. One hundred and fifty years later St. Augustine appeared in Kent as a missionary, and Christianity was re-established.

The era of Danish invasion and conquest lasted from 789 to 1035, culminating in the reign of Canute, son of Sweyn of Denmark, who from 1016 to 1035 was sole monarch of England. In 1042, under Edward the Confessor, the Saxon dynasty was restored. The Scandinavian influence, however, did not end here, for in 1066 England was invaded and conquered by the Normans, descendants of those vikings who in 905 had settled in the north of France and named it Normandy. Under William the Conqueror, who came in 1066, and his successors, the warring elements in the State became partially reconciled, the nation more united, Ireland was annexed,

the English tongue received a notable impulse toward its present form, and something of French culture was engrafted on the Germanic stock. The Normans were unable to subdue Wales, and this principality maintained its independence.

In 1215 John, the third Plantagenet king, was forced by the barons to sign the Great Charter at Runnymede, and in 1265 the commons were summoned to Parliament. In the long reign of Edward I., Wales was subdued (1283), although its formal incorporation with England did not follow for more than two centuries (1536). About that time papal authority came to an end in England through the act of King Henry VIII. The pope having refused to grant him a divorce from Katherine of Aragon, Henry had himself proclaimed "Supreme Head of the Church of England." The title of King of Ireland was also bestowed upon the English sovereign during this reign. At the death of Elizabeth in 1603, James I., the son of Mary Queen of Scots, succeeded to the throne, and the two kingdoms of Scotland and England were united under one king, but it was not until the year 1707, in the reign of Anne, that the legislative union of the two was perfected.

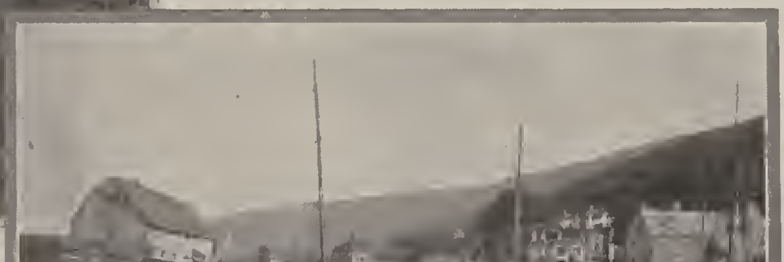
RICHMOND CASTLE AND OLD BRIDGE

In the old town of Richmond in the North Riding of Yorkshire, England, is the ruined fortress known as Richmond Castle, said to have been founded in 1070 by Alan Rufus, Duke of Brittany. The castle and its manors reverted to the Crown about 1490, and are still a part of the royal domain. The castle is on a lofty crag rising about 100 feet above the Swale River. Originally it covered five acres, but the Norman Keep—with pinnacled towers, and walls 100 feet high and eleven feet thick—is the only part that now remains.

In 1714 Queen Anne, King James' daughter, died and was succeeded, not by her brother James, but by George I., Elector of Hanover. Parliament had previously passed an act setting aside all claimants to the succession who professed the Roman Catholic faith and vesting the right to the crown in Sophia, Electress-Dowager of Hanover, a granddaughter of James I., and in her heirs, being Protestant. For 187 years England has been ruled by sovereigns of the House of Hanover. The reign of George III., which began in 1760 and closed in 1820, was notable for the American Revolution and the long and costly Napoleonic wars. His granddaughter Victoria (daughter of the Duke of Kent) ascended the throne in 1837. In 1854–56 occurred the Crimean War and following closely upon it the Indian Mutiny, which was suppressed after desperate fighting in 1858. The Queen was proclaimed Empress of India in 1877. Queen Victoria's death in 1901 closed the longest and, in many respects, the most remarkable reign in the history of England. She was succeeded by Albert Edward, her eldest son, who assumed the title of King Edward VII.

VIEW IN DEVONSHIRE

"Fair Devon," as the poets name it, is a shire or county in Southwest England, mild in climate and varied in scenery. It has many rivers, and its smaller streams, rapid, dashing, and rocky, are famed for trout-fishing throughout the Kingdom.



PORLOCK WEIR, DEVON

The small harbor, or weir, of Porlock, on the north coast of Devonshire, is about half a mile from the picturesque little village of the same name. The names in this locality are very familiar to all readers of the fascinating tale of "Lorna Doone."

Governmental. From feudal material the people of England have gradually developed a really admirable form of constitutional government. Its leading features — popular representation, a legislature of two houses, and an administrative ministry — have been adopted by nearly all republics of the old and new worlds.

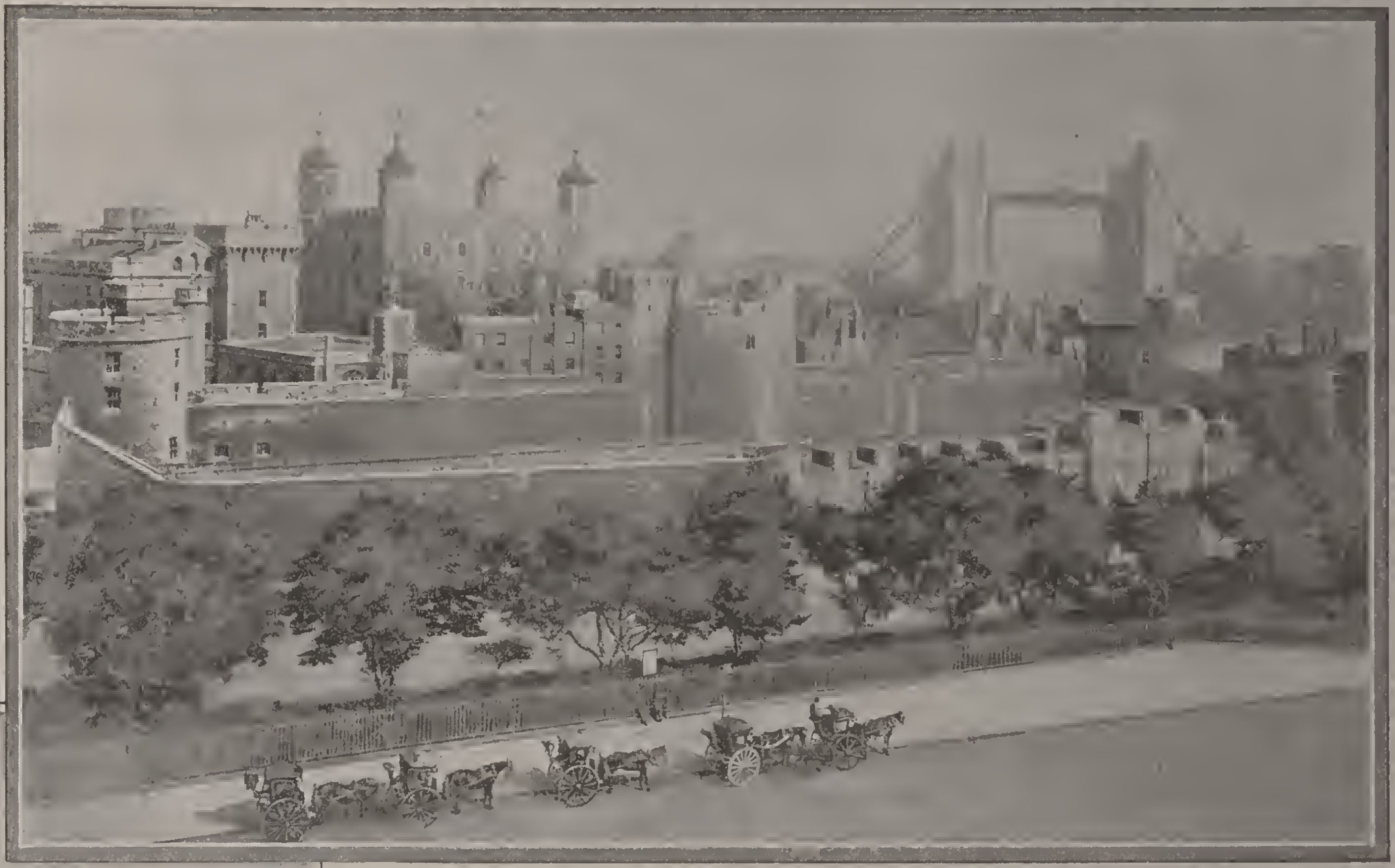
The English Constitution is unwritten, being made up of precedents. The supreme political authority is held to be vested in a King or Queen and the two Houses of Parliament. Nominally, the executive power belongs to the Crown, but actually it is in the hands of a committee of ministers called the Cabinet. The supreme legislative power is given by the Constitution to Parliament. Since this body makes the laws and through the Cabinet administers them, and since it is empowered by the Constitution to name the sovereign when any question of succession arises, it follows that Parliament is actually the embodiment of all the governmental power in the Kingdom.

The Cabinet. The chief officer of the Cabinet, known as the Prime Minister or Premier, is chosen by the sovereign from the leaders of the party which has a majority in the House of Commons. After his appointment he forms an administration, selecting its members from his party and submitting their names to the sovereign for approval. The Cabinet consists of twenty ministers, not all of whom, however, are directly engaged in the work of council. If the majority in Parliament become dissatisfied with the actions of the Cabinet they declare that the ministry no longer has their confidence, and if the ministers are not willing to change their course in deference to the wishes of the majority, they must resign.

The origin of the British Parliament was in the Witenagemote, or meeting of the wise men, which formed the assembly of the Saxons. In this body every freeman was supposed to have a vote, but really it was composed only of men of power and consequence. After the Conquest its place was taken by the Great Council, which gradually became transformed into Parliament, a small group of its members constituting a Royal Council, this latter being the progenitor, as it were, of the present Cabinet. William I. is said to have held "deep speech with his Witan." This "deep speech" in French is *parlement*, which is the origin of the name Parliament.

Lords and Commons. The Great Council was at first a gathering of nobles and bishops only, but in 1265, under Henry III., commoners were also called. In 1295 Edward I. issued writs ordering the election of two knights from each county and two citizens or burgesses from each city or borough. The division of Parliament into two houses, the Lords and the Commons, dates from the middle of the 14th century. The House of Lords is composed of those who hold their seats by hereditary right; by creation of the sovereign;

by virtue of office, as Bishops of the Established Church; by election for life, as in the case of Irish peers; or by election for the duration of Parliament, as in the case of Scottish peers. The number of names on the "Roll" in 1900 was 593. Parliament is summoned by the sovereign, by advice of the Privy Council, and is dissolved by royal proclamation, or upon a lapse of the parliamentary term of seven years. The average duration has been only about half the legal term. The House of Lords has the power of revising all bills that come from the House of Commons, except those relating to public revenue and expenditure. The lower house controls the expenditures of the nation. Under the Stuarts the Commons consisted of about 500 members, but the union of Scotland in 1707 added 45, and that of Ireland in 1801 increased the number by an additional 100. By the Redistribution Act in 1885 the total membership of the Commons was raised to 670.



THE TOWER, LONDON

The Tower, ancient fortress and gloomy state prison, historically the most interesting spot in England, is an irregular mass of buildings erected at various periods. The large central Keep, known as the White Tower, was built by William the Conqueror in 1078. Though at first a royal palace and stronghold, the Tower is best known in history as a prison.

HOUSES OF PARLIAMENT

The Houses of Parliament, or New Westminster Palace, situated on the bank of the Thames, have been erected since 1840, on the site of the old Parliament buildings, burned down in 1834. They cover an area of eight acres, and cost in all about £3,000,000.

The members of the House of Commons are chosen by qualified electors. The right to vote for these members was long confined to a small number of persons, making the allotment of seats unjust. But by the Reform Bills of 1832 and 1867–68 the present parliamentary divisions were made and the suffrage right extended. By the Act of 1885, further extending suffrage in the rural districts, nearly 3,000,000 electors were added, and male suffrage was made almost universal. Women can not vote for members of Parliament, but under certain conditions can vote for city and county councils and school boards, and sit as members of the latter.

Education. For purposes of education the Government expends annually over $60,000,000, four-fifths of which the schools and colleges of England and Wales receive. The State also contributes largely to art galleries, the British Museum, to the cause of scientific investigation, etc. A great stimulus was given to public education by the conference of 1857, under the direction of the Prince Consort, which resulted in the establishment of industrial schools and a code by which elementary schools are regulated. The most radical educational statute, however, was that of 1870, under which each district is compelled to provide school accommodation for every child between five and fourteen years, the power of enforcing attendance being granted to the school board. In 1891, by a fee grant of ten shillings for each child of school age in average attendance at the public schools, education was rendered practically free.

Higher education is obtained at the universities and colleges, many of which have been richly endowed for centuries. The oldest colleges in the Oxford and Cambridge groups date back respectively to 1249 (University College) and 1257 (Peterhouse College). The London University, which has done much to liberalize higher education, was formerly an examining board only, with power to confer degrees, but steps are being taken to convert it into a university for instruction as well. In a few of the colleges women are admitted as students, and there are besides several university colleges for women, notably Newnham and Girton Colleges, Cambridge; Lady Margaret and Somerville Halls, Oxford; Bedford College in London; one in Edinburgh; and one at Egham, in Surrey.

Notwithstanding the fact that the Anglican Episcopal is the established church of England, its membership does not at the present time include a majority of the population. In its fundamental doctrines it has remained unchanged since 1571. Ecclesiastically, the whole of England and Wales is divided into two provinces, presided over by the Archbishops of Canterbury and York, and into thirty-three bishoprics, each with its cathedral city. The king is by law the supreme governor of the church with power to nominate the

ST. PAUL'S CATHEDRAL, LONDON

St. Paul's, the Cathedral of the Bishop of London, is the third largest Christian Church in the world. It stands on the site of a church built by Ethelbert, King of Kent, in 610, and burned in 1087. After being rebuilt it was again destroyed in 1136. "Old St. Paul's," completed during the 13th century, was destroyed in the Great Fire of 1666. The present structure was completed in 1710.

archbishops and bishops. Assisting each bishop in the work of his diocese are certain deans, archdeacons, and rural deans.

The system of public charities in the United Kingdom is so complex, so dependent upon the coöperation of private individuals with government officials, as to make it exceedingly complicated. London, with its large number of educational, industrial, and reformatory institutions, and its philanthropic and social science organizations, is the center of beneficent activities.

Cities of England. Of the total population of England and Wales in 1901 (32,520,000), 77 per cent lived in the cities, leaving 23 per cent only in the rural districts. The urban population still continues to increase more rapidly than the rural, and the same tendency of population exists in these divisions of the United Kingdom as in the United States, namely, to concentrate in the larger and growing cities. The rate of increase in population is highest in towns of from 50,000 to 100,000 inhabitants.

QUEEN VICTORIA

Queen Victoria succeeded to the throne in 1837, at the age of eighteen years. She died January 22, 1901, after the longest reign (63 years) of any English sovereign.

London, by reason of its age, its historic interests, its commercial and financial importance, and its immense population, is the most notable of all modern cities. The limits of the city are not easily defined, for it is composed of the old city, or London proper; Parliamentary London, now conterminous with the County of the City of London; and Greater London, embracing the area included in the Metropolitan Police District, 690 square miles. Parliamentary London and the County of the City of London have an area of about 120 square miles. The city, which is under the jurisdiction of the Lord Mayor, occupies little more than a square mile, between the Tower and the memorial which marks the site of Temple Bar. In this, the greatest business and financial center of the world, the population during the day is about 300,000, but at night it is only one-tenth of that number Within its limits are the Bank of England, the Royal Exchange, the Mansion House or official residence of the Lord Mayor, the Guildhall, and St. Paul's Cathedral, as the central point, towering over all. Not far from the site of Temple Bar, which marks the junction of the Strand with Fleet Street, are the Royal Law Courts, and near by the *London Times* and many other metropolitan newspapers are published.

WESTMINSTER ABBEY

Westminster Abbey, founded in the 7th century and rebuilt by Edward the Confessor (1050-65), dates in its present form from the 13th century. For hundreds of years it has been the burial place of England's greatest dead, kings, peers, or commoners. The Poet's Corner records the most famous names in English literature.

The West End of London is the fashionable residence district, containing the fine squares, club houses, Regent's and Hyde Parks, Kensington Gardens, the noted museums and art galleries, and the attractive shops of Oxford, Regent, and Bond streets. Here also are Buckingham Palace, the Houses of Parliament—colossal Gothic structures bordering the Thames—and Westminster Abbey. East of the city is the district called the Long Shore, which extends along the bank of the Thames, and is inhabited by vast numbers of working people drawn thither by the commerce and manufactures centering about the quays, wharves, etc. The immense docks and warehouses of this quarter make it the most active point of the Port of London, that great center of the world's commerce, extending for fifty miles along the Thames Estuary from London Bridge to the Nore. The most striking object which overlooks the Thames at this point is the confused mass of walls and towers known as the Tower of London, once a fortress and State prison, but now containing an extensive collection of arms and armor, the crown jewels, and many objects of historic interest. On the south side of the river, connected by means of tunnels, subways, and bridges, lie the manufacturing districts of Southwark, Lambeth, and Bermondsey, and Rotherhithe, the site of the commercial docks; opposite the Isle of Dogs are Greenwich, with its observatory and magnificent hospital and the Royal Naval College; and above Greenwich is Deptford with its great foreign cattle market. Also on the south side is the garrison town of Woolwich, the seat of the Royal Military Academy, established in 1719, and of Great Britain's most extensive arsenal.

Liverpool, on the estuary of the Mersey, is the most densely populated city of England and the most important cotton market in the world. Although the town is as old as the 13th century, its substantial prosperity dates from 1840, when steam communication was established between Liverpool and New York. The city's chief claim to importance lies in its great foreign trade, particularly in its monopoly of the Kingdom's trade with America, Australia, and West Africa. Liverpool is the outlet for the manufactures of Lancashire, West Yorkshire, and Staffordshire, and its imports of cotton and foodstuffs are enormous. Most of the raw wool for Leeds and cotton for Manchester are received through this port. Formerly, large ocean steamers entering Liverpool were unable, except at high tide, to cross the bar at the mouth of the estuary, but broad and deep channels have been cut through this obstruction, making the harbor at all times accessible. The Liverpool docks, which extend along the Mersey for nearly seven miles, present a wonderful sight. Outside these, and joined to them by bridges, is a floating landing-stage; by means of this the largest transatlantic steamers may come alongside to receive or

TEMPLE BAR

Temple Bar, built by Sir Christopher Wren, was the western gate of the city of London. Its name comes from the near-by Temple, originally built by the Knights Templar, but leased for centuries by the lawyers' corporations of the Inner and Middle Temple. The archway was removed in 1878.

discharge passengers. Controlled by the same management are the docks of Birkenhead, a seaport and residential suburb on the left bank of the Mersey. In the shipyards of both places are built large mercantile and naval vessels.

Manchester, lying on the left bank of the Irwell, a tributary of the Mersey, is the leading industrial town of England and the principal center of the cotton manufacture. Although closely identified with the great cotton industries, it is rapidly becoming a mercantile rather than a manufacturing city, many of the largest factories furnishing the goods that fill the vast warehouses now being located in the suburbs around the city. Besides cotton goods the manufactures include silk and worsted goods, chemicals, and machinery. The newer portions of the city are handsomely built. The Royal Exchange contains the great hall where cotton is bought and sold. Manchester is the center of an extensive canal system, of which the Ship Canal, opened in 1894, is the most important.

Birmingham is the fourth city in importance in England and is the center of the metal trades. The city is second only to Manchester in industrial importance. Its iron industries date from the 16th century, and in modern times it has won the prestige of being the best governed city in the Kingdom. Its public libraries and museums are models, and so thoroughly enforced are all sanitary regulations regarding manufactories, schools, and public buildings, that the city's death rate is unusually low for an industrial center.

Cardiff, the most important town and seaport in Wales, is situated in the estuary of the Severn, on the Taff River, one mile from its mouth. It has a large public library, an excellent museum, and is the seat of the University College of South Wales and Monmouthshire. Its growth has been very rapid within late years because of the excellent steam coal found near, which has made it the chief point of export for that commodity. It also has large manufactories of tin plate, iron, and steel, besides important shipbuilding industries.

PONT-Y PAIR

This romantic bridge, over the river Llugwy, in the county of Carnarvon, Wales, was built in the 15th century.

CHAPEL, BETTWS-Y-COED

The beautiful little village, Bettws-y-Coed, situated at the confluence of the rivers Conway and Llugwy, derives its name, which means "Chapel in the Wood," from this quaint old church. The village is a favorite resort, in the summer and autumn, of tourists, anglers, and artists.

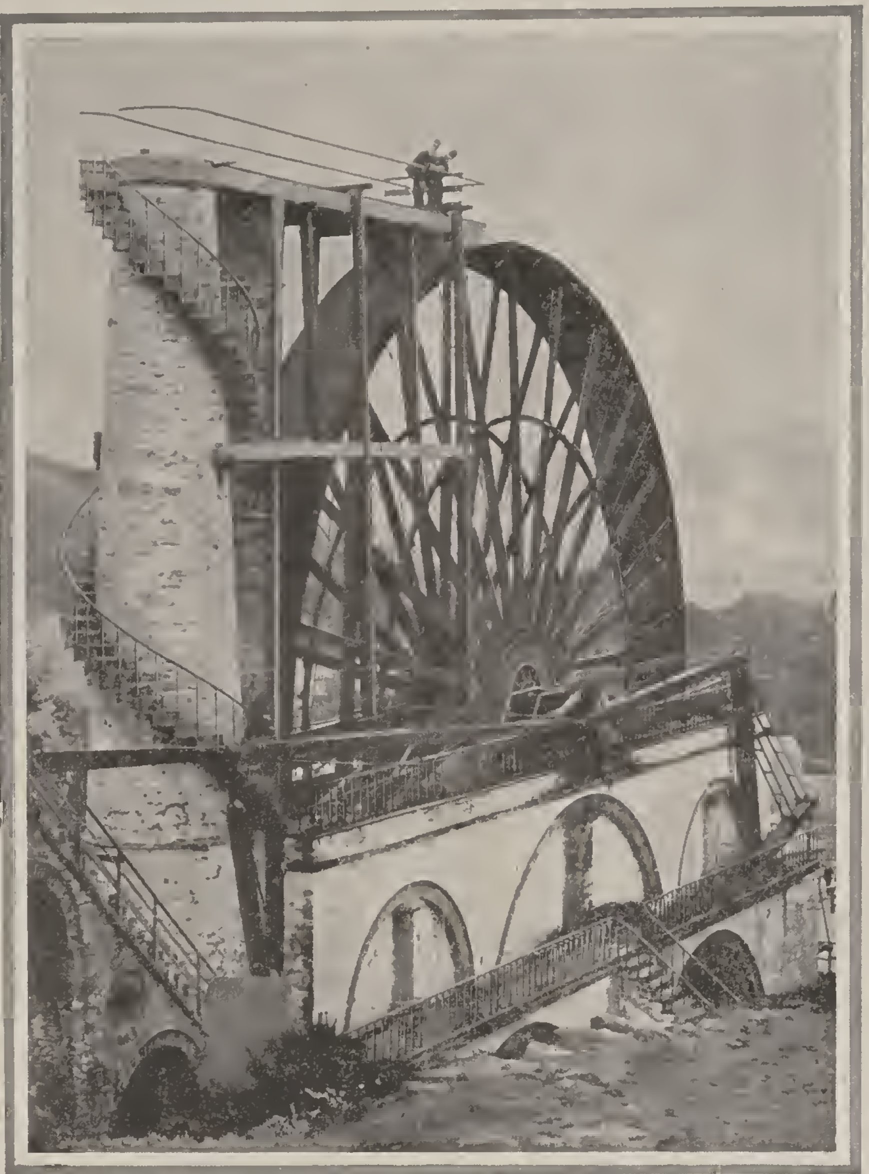
The Channel Islands. The islands lying in the English Channel off the northwestern coast of France belong geographically to the latter country, but politically they have been dependencies of the English Crown since the Norman Conquest. The climate is mild and equable, evaporation is rapid, and snow and frost are rare. These facts, together with the picturesque scenery and the historic and legendary interests of the archipelago, make it a favorite resort for tourists. The principal islands of the group, which has a total area of seventy-five square miles, are Jersey, Guernsey, Alderney, Sark (Serq), and Herm. The main occupation of the inhabitants is market-gardening, the chief exports being early vegetables for the London market and fruits grown under glass. Cattle, excellent for dairy purposes, are raised, each island having a special breed. Solitary, jagged rocks and rapid ocean currents render navigation in the vicinity of the larger islands dangerous, but steamers ply regularly back and forth between them and the neighboring coast towns of England and France. Jersey, the ancient Cæsarea (Cæsar's Isle), is the southernmost and the largest of the islands. Its area is forty-five square miles; its length, from east to west, is eleven miles, and its breadth is four miles. The coast is rocky and abrupt, the only large inlet being St. Aubin's Bay on the east side of the island. The mean annual temperature is about 52° and the rainfall is thirty-four inches. Early potatoes and apples form the principal crops, and from the milk of the famous Jersey cows is made excellent butter. St. Helier, on St. Aubin's Bay, is the capital and largest town. Guernsey, the second in size among the islands, lies thirty miles west of the coast of Normandy and seventeen miles northwest of Jersey. Its area is 16,005 acres; its length is nine miles and its greatest breadth is five miles. The coast, famous for the beauty of its scenery, is indented with bays and lined with sunken rocks. Vegetables, wheat, barley, and apples (for cider) are

GROUP OF WELSH WOMEN

This picture, showing a social gathering of Welsh women, well depicts the quaint costume to which the natives of that country tenaciously cling, even in these days of innovation and changing fashion. The high bell hat has been characteristic of Welsh women for centuries.

GUERNSEY ROCKS AT MOULIN HUET BAY

Guernsey is the second in size of the Channel Islands. The southern coast consists of a bold and almost uninterrupted cliff, which reaches a height of three hundred feet at Moulin Huet Bay.



MINING WHEEL, LAXEY, ISLE OF MAN

The Isle of Man, famed for the picturesque beauty of its scenery, practically constitutes one large pleasure ground for the nearby manufacturing districts of England. At Laxey, a thriving mining village in one of the most beautiful of the numerous attractive glens, are the Glen Gardens, a much frequented resort, and the great "Mining Wheel," seventy-two and one-half feet in diameter, which is one of the sights of the island.

the chief crops, but owing to the mildness of the climate oranges, melons, and figs mature in the open air. Guernsey has one important mineral product, a variety of granite almost unequaled for paving qualities. St. Peter Port is the capital and chief town on the island. Of the other noteworthy members of the archipelago, Alderney, the third in size, is famed for its breed of cows; Sark supports a fishing and manufacturing community; and Herm contains inexhaustible supplies of granite, and is celebrated for the beautiful variegated shells strewn lavishly along its beach. For certain administrative purposes the islands are included in the county of Hampshire, and for ecclesiastical purposes they form a part of the diocese of Winchester. Local governments, possessing peculiar and extensive powers, exist within the little archipelago—one for Jersey, and another, with its seat at St. Peter Port, having control not only over Guernsey, Alderney, Sark, and Herm, but also over certain neighboring islets. These governments consist of separate legislatures and complete administrative bodies. At the head of the latter are lieutenant-governors appointed by the Crown. The islanders are of Norman descent; they observe many quaint Norman customs and for the most part speak French. Each island, however, has its own particular patois, although all of the dialects are derived from the *langue d'oui*. In 1901 the population of the Channel Islands was 95,341. The strategic position of the islands is so important that the British Government has spent vast sums on their defenses, St. Peter Port and other points being defended by strong forts.

UPPER FALL, SULBY GLEN, ISLE OF MAN

The largest Manx river is the Sulby, which rises near Snaefell and empties into the sea at Ramsey. The central part of the island is mountainous, with many picturesque glens and waterfalls formed by the mountain streams.

The Isle of Man. The Isle of Man, anciently known as Mona or Mannin, lies in the Irish Sea thirty-three miles west of England and thirty miles east of Ireland and is independent of either England or Scotland. The island has an area of 227 square miles; its length, from northeast to southwest, is thirty-three miles, and its greatest breadth is twelve miles. In the north the surface is flat and covered with glacial drift, but the center and south are traversed by a ridge which in Snaefell attains an altitude of 2,034 feet above sea-level. From the above-mentioned elevation can be seen neighboring portions of England, Ireland, and Scotland. The entire hilly region abounds in picturesque glens and swift flowing streams with multitudinous cascades. The coast in general is lined with precipitous bluffs, especially at the south; at their bases lie expanses of smooth, sandy shore merging into the clear waters of the surrounding seas. Clay slate is the characteristic rock formation, but extensive measures of limestone and granite also appear. Although storms of wind and rain are frequent the climate is mild and the winters are open. The mean temperature for January is 38.2°; for June, 60.5°.

Mining, stock-raising, and fishing are the principal occupations of the islanders. At Laxey, on the east coast, are located the important lead mines; in addition to their product of lead the ores yield considerable silver. There also exist mines of zinc and quarries of marble, limestone, greenstone, and slate. The principal towns are Douglas, the capital, Castletown, Peel, and Ramsey.

The original inhabitants were the Manx, a tribe of Celtic origin. Of the earlier history of the island nothing authentic is known; it was conquered by the Scotch, but Edward I. of England added it to his dominions, establishing within the newly acquired province a system of viceregal government which continued in force until 1806, when possession passed by purchase to the British Crown. The present method of government differs from that of any other section of the United Kingdom and retains many quaint features that belong to an earlier day. Unless specially mentioned, the island is not bound by acts of Parliament.

SCOTLAND

SCOTLAND, or North Britain as it is sometimes called, lies between 58° 40′ 30″ and 54° 38′ N. lat. and 1° 45′ 30″ and 6° 14′ W. long. Its greatest length, from Dunnet Head to the Mull of Galloway, is 288 miles; its extreme breadth, from Buchan Ness to Ardnamurchan Point, is 175 miles and its minimum breadth, between the firths of Forth and Clyde, is only thirty-two miles. The area of Scotland, inclusive of its many islands, is nearly 30,000 square miles. To Scotland belong 788 islands, of which the greater number, being rocky and barren, are uninhabited. The most important insular groups are the Hebrides, the Shetlands, and the Orkneys. The Hebrides, consisting of two principal groups—the Outer and Inner Hebrides—embrace altogether about 500 islands, large and small; the Shetlands number more than 100, and the Orkneys comprise sixty-seven islands.

EDINBURGH CASTLE AND NATIONAL GALLERY

Edinburgh Castle crowns a cliff perpendicular except on the side facing the city. The castle served as a stronghold before the town existed, the early Scottish Kings living here in times of danger. It can now accommodate 2,000 soldiers and has an armory that will hold 30,000 stands of arms. The National Gallery is situated at the foot of the embankment connecting the old and new parts of Edinburgh, and contains a fine collection of pictures.

Mountains. Scotland falls naturally into three physical divisions—the Highlands in the north and west, the Central Lowlands, and the Southern Uplands. The mutual boundaries of these divisions are marked by two almost straight, nearly parallel lines trending northeast and southwest, indicating the limits of geological elevation north and south respectively of the intervening area of depression. The Highlands, occupying considerably more than one-half of the country, are bounded on the south by a line drawn from Stonehaven southwest to the Mull of Kintyre. They comprise an elevated region traversed by rugged mountain ranges having an average altitude of about 1,500 feet, between which are valleys and, along the coast, extended arms of the sea reaching for considerable distances inland. The Highlands district is divided into two approximately equal sections by a remarkable gorge, Glen More (the great glen), extending in a straight line nearly 100 miles, from Inverness Firth to Loch Linnhe. It contains three long lochs of great depth, which are connected by the Caledonian Canal, now of no value except as a route for tourists. The mountains of the region north of Glen More are not so lofty as are those south of it; they attain their greatest altitudes on or near the Atlantic Coast, where the elevations rise abruptly from the sea to a height generally ranging between 2,000 and 3,000 feet and form a part of the western water-shed. The intervening valleys of the northwestern mountains contain lakes of rare beauty, among which are Loch Maree, Loch Shiel, and Loch Morar, the last, with a maximum depth of 1,070 feet, being the deepest inland body of water in the United Kingdom. On the southern border of the Highlands are the Grampian Hills, extending from Loch Awe on the Atlantic Coast to near Stonehaven and Aberdeen on the North Sea. The greatest elevations in the Highlands are Ben Nevis, which is the loftiest summit in the Grampians and the highest mountain not only in Scotland but in the British Isles, Ben Macdhui, Cairntoul, and Cairngorm.

Lowlands and Uplands. South of the Highlands lie the Central Lowlands, which occupy a comparatively narrow belt across the country, between thirty and sixty miles in width, limited on the south, roughly speaking, by a line drawn from Dunbar to Ayr. This division possesses the richest lands in Scotland and important beds of coal and iron ore and, although embracing only about 20 per cent of the area of the mainland, contains more than one-half of the entire population, the greater part of the wealth, and the three largest cities. Its elevation is on the whole considerably under 500 feet. It contains several ranges of hills, among which the Sidlaw, Ochil, and Campsie Fells on the north, and the Pentland and Lammermuir on the south, are the most important. The principal inland basins are Lochs Lomond and Leven.

LOCH AWE AND BEN CRUACHAN

Loch Awe, in Central Scotland, near the west coast, is about twenty-four miles long, but little more than a mile in average width. The finest scenery is at the north end. Here the lake is wider and is dotted by several wooded islands, while from the shore rises Ben Cruachan, 3,610 feet high.

South of the Central Lowlands lie the Southern Uplands, occupying about one-tenth of the area of the mainland. The surface is hilly, but presents with its round-topped, grassy knolls a striking contrast to the broken, craggy Highlands. The northern margins in general rise rather boldly above the fields and moors of the Lowlands. The Uplands are distinguished by their gentleness of undulation and may be regarded as an area of table-land traversed by innumerable valleys with slopes amply sufficient for a perfect system of drainage. Wide, grassy moors, frequently as level as a prairie, lie among the encompassing hills. Even at their greatest heights the Uplands are covered with verdure affording excellent pasturage.

Geologically, Scotland is divided, as in surface characteristics, into three regions marked by very similar boundaries. The southern, from the south boundary to the Firth of Clyde, shows the lower Silurian strata; the central, including the basins of the Clyde, Forth, and Tay rivers, abounds in the Devonian strata, or old red sandstone, the third, or northern region, is the locality of crystalline or metamorphic rocks.

QUEEN MARY'S BEDROOM, HOLYROOD

Coast-line and Fiords. The eastern and western coast-lines of Scotland differ greatly in general configuration. The former is indented by broad arms of the sea projecting for considerable distances inland, but is otherwise in general unbroken. The land declines gradually to the beach, or to bordering cliffs that have been eroded by the waves; the shores, generally speaking, are low and cultivated to the line of the tide, with few islands in the offing. The western coast, on the other hand, is indented throughout its whole extent by long, narrow fiords or sea lochs, and skirted by chains of islands partaking usually of the characteristics of the neighboring coast. The surface of the mainland descends abruptly, often precipitously, to the sea. The shore has been subjected to great erosion, and the existence of the fiords is explained by the fact that many of the coastal glens in a previous geological age were invaded by the sea. Along the Orkney and Shetland coasts are found the highest cliffs, which rise to heights of 1,100 or 1,200 feet above the waves that have tunneled their bases.

On the eastern coast are the firths of Forth, Tay, Moray, Cromarty, and Dornoch, and on the western coast the firths of Lorne, Clyde, and Solway. The Firth of Clyde is the largest and most valuable of the Scottish inlets. The chief rivers of Scotland are the Tweed, Forth, Tay, Dee, and Spey, flowing into the North Sea, and the Clyde, emptying into the Atlantic Ocean. With the exception of the last named these streams generally are unnavigable and are important principally for the excellent harbors at their mouths.

Lakes and Tarns. Scotland is famed for nothing more widely than for its lakes. These have been divided according to their origin into four classes, namely, glen lakes, rock tarns, moraine tarns, and lakes of the plains. The first named are depressions or sunken valleys among the mountains; they are narrow and profound and have originated within a comparatively recent period. The lakes are almost wholly confined to that part of the Highlands which lies east of a line drawn from Inverness to Perth. The largest is Loch Lomond, twenty-four miles long and seven miles broad; other important lakes of this character are Awe, Ness, Tay, and Ericht. The rock tarns are small lakes lying in rock-basins on the sides or summits of ridges, and on rocky plains, and are scattered broadcast over the regions where they occur without regard to valley depressions. The moraine tarns occur only in the mountainous regions, being ponds inclosed by the morainic deposits of retreating ice-sheets.

Climate, Flora, and Fauna. The temperature of Scotland shows very appreciable variations in the different sections of the country. On the eastern coast of the island of Skye the means for January and July are 39° and 56.8°, respectively; at Perth, near the mouth of the Tay River, they are 37.5° and 59°. These variations are due to the differences in temperature between the waters of the Atlantic Ocean and those of the North Sea. The western regions have a more abundant rainfall than the eastern, owing to the fact that the humid breezes coming from the west across the Atlantic are chilled on striking the coast ranges and deposit there the water they can no longer retain. The average rainfall is thirty-seven inches on the western coast and about twenty-three inches on the eastern coast.

HOLYROOD PALACE, EDINBURGH

Holyrood Palace, originally a wing of Holyrood Abbey, was the residence of the Scottish Kings. The northwest angle and tower, containing the apartments of Mary, Queen of Scots, are the only parts of the original palace that escaped destruction by Cromwell's army (1650). The present buildings date from the Restoration.

In the more mountainous regions the rains wash away the soils, leaving the surface rocky and almost devoid of vegetation. On the gentler slopes grow mosses, ferns, and heather, the latter covering the ground with a wealth of purple bloom in autumn. On the level plains the flora is identical with that of England and Continental Europe. The chief indigenous trees are the oak and beech in the Central Lowlands and the pine, spruce, and birch in the higher tracts. The native wild animals of Scotland, as indeed of all Britain, once included the brown bear, wolf, boar, and beaver, long since exterminated, and the wild ox, of which a few herds yet exist. The red deer still roams the Highlands and the fallow-deer is found in the Lowlands. Migratory birds abound during summer; fish, such as the cod, haddock, and whiting, swarm in the North Sea, and fresh-water varieties inhabit the lochs and streams.

Resources and Industries. The productive area of Scotland is limited, but agriculture flourishes in the Central Lowlands. The products comprise mainly wheat, rye, barley, oats, peas, beans, hay, potatoes, turnips, and flax. Cattle and swine are raised both in the Highlands and in the Lowlands. For the raising of live stock three districts in particular are famous—Clydesdale in Lanarkshire for its heavy draft-horses, the Shetland Islands for their diminutive and hardy ponies, and Ayrshire for its dairy cattle. Of the Scottish sheep two breeds are particularly prized—the Cheviot for its wool and the black-faced variety for the excellence of its mutton.

The principal commercial minerals are coal, iron, and lead, the coal-measures lying in the Central Lowlands. Building stones, as limestone, granite, sandstone, slate, and marble, are quarried.

The manufacturing enterprises of Scotland constitute the most important departments of its business activities. The textiles produced comprise mainly woolen goods, linen, jute, cotton, silk, and floor-cloth. Whisky forms an item of manufacture only less important than the class of products just mentioned. The shipyards which have made the steel ships of Scotland famous are located on the banks of the Clyde River. Other important manufactures are iron and steel products, especially locomotives, chemicals, and pottery.

Historical. Scotland was known to the Romans first as Caledonia and later as Scotia, a name applied at first to Ireland. Two tribes of Celts—the Picts, who came from Gaul, and the Scots, who came from Ireland—constituted the aboriginal population. The Pictish kings became extinct in the 9th century and were followed by rulers of the Scottish line. Macbeth, who reigned from 1039 to 1054, enlarged his dominions and, although he had acquired the throne by the murder of his overlord, was a strong and trusted ruler. Malcolm III. (1056–93) married the dispossessed English princess, Margaret, and took up the Saxon cause, fighting against William the Conqueror and later against William Rufus, until his death in a battle at Alnwick Castle. Alexander III. (1249–86) recovered the Isle of Man and all of the Hebrides from the Norwegians, who had held these islands for 300 years.

On the death of Alexander III. his infant granddaughter Margaret fell heir to the Crown, but she died while on her way from Norway. Then followed a dispute among various claimants for the succession, chief of whom were John de Baliol and Robert Bruce. Edward I. of England, as arbiter, decided the contest in favor of Baliol. But the English monarch now assumed the rights of a feudal suzerain and made requisitions upon the Scottish nobles for service in his foreign wars, a demand which was positively refused. In the spring of 1296 Edward invaded and subjugated Scotland, taking Baliol back to England as a prisoner. Sixteen years later the Scots, under their new King, Robert Bruce, took up arms against the English, and in 1314 won a most decisive victory over them at Bannockburn. When Bruce died (1329) he left the throne to an infant son, David, who upon reaching manhood proved unworthy of his father's glories. His reign and those of his successors, Robert II. and Robert III., embraced the most unhappy era of Scottish history. Between the years 1333 and 1370 the country was engaged in protracted and desolating wars with England; in 1346 King David was taken prisoner at Durham and remained in custody for eleven years. Shorter but not less important wars occurred between 1388 and 1403. Meanwhile Donald, Lord of the Isles, had taken possession of the Western Highlands and began to invade the Lowlands; he was defeated in the battle of Harlaw, July 24, 1411, and retreated to his island possessions. Prince James, son of Robert III., was captured in 1405 and detained at the English court until 1424, when he was set free to return to his kingdom, of which he had been titular ruler since 1406. His reign in a measure restored peace to Scotland, but in the midst of his reforming labors he was assassinated (1437). The reign of James II. was disturbed by internal feuds, in which the noble family of the Douglases played the most conspicuous part. James III., after a kingship of only six years, was stabbed to death while fleeing from Sauchie Burn, where he had been defeated in battle by his rebellious nobles. During the next reign, that of James IV., the powerful Lordship of the Isles was broken up after a series of fierce revolts and the claim to independent sovereignty abandoned forever. James IV. married Princess Margaret of England, and, by treaty, the first peace in nearly two centuries was established between the two countries. Ten years later, however, it was broken by James himself, who invaded England and fell September 9, 1513, on the famous field of Flodden.

The next reign, that of James V., was unimportant; but on the accession of the infant Queen Mary in 1542 began the most famous period of Scottish history. The first four years of Mary's reign were occupied mainly by futile attempts on the part of Henry VIII. of England to enforce the betrothal of the Queen to his own infant son Edward. John Knox and others were then urging the cause of church reform in Scotland; in 1557 the famous First Covenant was drawn up, shaping the new creed which was to supplant the old historic faith in the country beyond the Tweed River. In 1558 the Queen was married to the Dauphin of France. The Protestant Reformation had now gained vigor and in 1560 a meeting of the Estates of Scotland approved the Geneva Confession of Faith. Thus far the government had been a regency, but in 1561 Mary returned to Scotland from France and undertook the government of her dominions in

THE BRIG O'DOON

This bridge, famous for "Tam O'Shanter's Ride," is situated at Ayr, in the heart of the "Burn's Country."

FINGAL'S CAVE

This is one of many interesting caves on the Isle of Staffa, in the Irish Sea, west of the Isle of Mull. The basaltic columns at the entrance rise from twenty to forty feet above the sea. In fair weather the cave, 200 feet in length, may be entered by boat.

person. Her first husband was dead, and in 1564 she remarried, taking as her consort the worthless Henry Stuart, Lord Darnley; but she soon grew tired of him and made a favorite of her Italian secretary, David Rizzio. Rizzio was murdered in 1566 and Darnley in the succeeding year, and three months after the death of the latter the Queen accepted as her third husband James Hepburn, Earl of Bothwell. The incensed barons thereupon rose in arms and forced Bothwell to flee the country. The Queen surrendered, was imprisoned on an island in Loch Leven, and was soon forced to abdicate in favor of her infant son, who now became James VI. of Scotland. In 1568 Mary escaped from prison and gathered about her a considerable party, but was defeated in the battle of Langside, May 13th. She then fled to England, where she was confined in various castles and manor-houses, and finally ended her life on the scaffold at Fotheringay, February 8, 1587, after trial on the charge of conspiring against the life of Queen Elizabeth.

LOCH LOMOND

Loch Lomond is the largest of the Scottish lakes, being twenty-four miles in extreme length and seven miles in greatest breadth. The high mountains that partly surround it, the loftiest of which is Ben Lomond, the quaint old hamlets (clachans), and the many wooded islands make it the most beautiful as well.

A HIGHLAND CLACHAN

During the minority of the new ruler the country was much distracted by civil conflicts. On the death of Elizabeth in 1603 James VI. fell heir to the English throne, and from that time the history of Scotland was more or less intimately connected with that of England, although the legislative union of the two kingdoms did not occur until 1707.

Scottish Cities. The largest city in Scotland is Glasgow, situated at the head of ocean navigation on the Clyde River, which empties into the firth of the same name. Besides being the most populous city of North Britain it ranks first in wealth and commercial importance. It is the terminal point of several transatlantic steamship lines and its shipbuilding interests are enormous, the "Clyde-built ships" launched from its docks being known and valued in every quarter of the world. Other important manufacturing industries of the city comprise the making of cotton, woolen, and silk goods.

A SHETLANDER SPINNING

The Shetland Islands form the northernmost part of Great Britain. Its people are descendants of the Norsemen. Sheep-raising is an important industry, the wool being spun by the women and knit into stockings and other articles that are exported.

Among the most remarkable edifices in the city is the ancient Cathedral, founded in 1197, from the center of which a spire rises to a height of 225 feet. The University of Glasgow, founded in 1450, was transferred to its present magnificent quarters in 1870. The buildings form, with their surrounding park of twenty-two acres, a very attractive and imposing sight.

Edinburgh, the capital, situated two miles south of the Firth of Forth, is one of the most picturesque cities of Europe. It is the leading educational and publishing center of Scotland and is an important railway terminus. The city is replete with objects of historic interest: Holyrood Palace, the former residence of Scottish kings, the Cathedral of St. Giles, Victoria Hall, Parliament House, Tron Church, Dean Bridge, the Scott Monument, Arthur's Seat, the old Castle, and other buildings that abound in romantic associations.

Dundee, situated on the left bank of the Firth of Tay, is a flourishing seaport. The old Steeple, 156 feet high, built in the 14th century, is the most conspicuous historic landmark. The principal manufactures are flax and linen; a minor but more distinctive industry is the production of marmalade. Aberdeen, lying between the rivers Don and Dee, is one of the oldest and most important cities in Scotland. It is notable for its excellent harbor, for its quarries of fine gray granite, of which rock the city is chiefly built, and for its University, founded (as King's College) in 1494.

Government and Education. Scotland, with population (census 1901) of 4,470,000, is represented in the British Parliament by sixteen peers in the House of Lords and seventy-two members in the House of Commons. The provincial government is vested in a Board consisting of the Secretary for Scotland (who is also the President), the Solicitor-General for Scotland, the Under-Secretary for Scotland, and three other members.

Education is free and compulsory. From the closing years of the 17th century elementary instruction was regulated by the act of William and Mary providing for the maintenance of a school in every parish by means of a land tax. The present system, however, dates from 1872, when the Scotch Education Department was instituted and each burgh and parish or group of parishes was required to have a school-board to regulate elementary and secondary education. To supply the need for higher education Scotland has four universities, located respectively at St. Andrews, founded in 1411; Glasgow, 1450; Aberdeen, 1494; and Edinburgh, 1582. The numerous professional and scientific schools have adopted a high standard of efficiency. The Carnegie trust, which was founded in 1901 with a capital of $10,000,000 and an annual income of $500,000, for the advancement of university instruction in Scotland, in that year paid fees for 2,441 students, amounting to $114,710.

IRELAND

IRELAND, a large island forming one of the component parts of the United Kingdom, lies off the western coast of England and Scotland and is bounded on the north, south, and west by the Atlantic Ocean and on the east by the Irish Sea and the North and St. George's channels. Geographically Ireland is situated between 51° 27′ and 55° 23′ N. lat. and 5° 20′ and 10° 28′ W. long. It has an area of 32,583 square miles, and a population (census of 1901) of 4,458,775.

Physical Contour. Ireland differs in contour from most islands of the world. The usual form of such bodies of land is a central elevation or ridge from which the surface slopes more or less abruptly to the coast; but in Ireland the central portion is a great plain or basin nowhere more than 300 feet above sea-level. Around this depression, in which are many small lakes and bogs, the country rises into hills and low mountains, comprising a ring-shaped environment along the coast which is frequently broken by wide intervals extending down to the sea, forming valleys watered by the various streams that take their rise in the interior. In the north, embracing practically the whole of Ulster, the country is diversified by two mountain groups, namely, the mountains of Donegal, culminating in Mount Errigal (2,466 feet), and the mountains of Antrim, rising to an elevation of 2,400 feet. The mountains of Wicklow in Leinster embrace a number of groups, compact in structure, with few outlying hills. This range contains some of the most picturesque scenery in Ireland, and the region in which it lies is one of the most frequented in the United Kingdom. Lakes, cascades, and bold promontories border the coast, while the ancient ruins and the romantic traditions of the locality endow it with great charm for the tourist. Far wilder but not less attractive are the highlands of Connemara in the west of County Galway, within a region surrounded mainly by Galway and Clew bays, the Atlantic Ocean, and Loughs Mask and Corrib. These western highlands culminate in Muilrea (2,688 feet), at the mouth of Killary Harbor. In County Mayo, north of Clew Bay, exist similar elevations, the highest of which is Nephin (2,646 feet). The principal mountains in the southwest are those of County Kerry, among which occur the highest elevations in Ireland, Carrantuohill (3,414 feet) in Macgillicuddy's Reeks, and Brandon (3,127 feet).

SACKVILLE STREET, DUBLIN, FROM THE RIVER

This view of Sackville Street, the finest street in Dublin, is taken from the south at the bridge crossing the River Liffey. It shows the bronze statue of O'Connell, by Foley, unveiled in 1882; the marble portico of the General Post Office, farther north; and still farther off, the Nelson Monument; this is a Doric column, 122 feet high, surmounted by a statue of the great naval hero.

Bogs and Lakes. The central lowland, besides its tracts of green pasture-land, contains many bogs from which peat, the domestic fuel of the island, is taken, and numerous lakes, sinuous in outline and studded with myriads of islands of great beauty. The lakes or loughs are many in number and most of them are well worthy of a visit from the tourist. The most noted, although not the largest, are the Lakes of Killarney, a group of three connected loughs situated in County Kerry directly north of Macgillicuddy's Reeks. These lakes together form a body of water 16½ miles long and two miles wide. From the western, southern, and southeastern borders of the lakes rise the loftiest peaks in Ireland, containing wild ravines, romantically beautiful woods, and bold cascades. The largest lough in Ireland is Neagh in County Antrim; it has a length of seventeen miles and a breadth of ten miles. Among the other loughs famed for their beauty are the Upper Erne, Lower Erne, Allen, Corrib, Mask, Conn, Ree, and Derg. Many of these lakes, especially in the limestone region, owe their existence to chemical solution, and their waters are impregnated with carbonic acid gas that dissolves the encompassing limestone rock and carries away large quantities of carbonate of lime in solution. Thus it is that these lakes are being constantly enlarged. Sometimes the size and composition of a lough are changed by the caving in of a limestone arch, when subterranean channels connecting with other bodies of water are formed, or even, under certain conditions, a new lake. Lough Lene, for example, overflows into the Deel, an affluent of the Boyne River, and also connects through an underground channel with a tributary of Lough Ree. Lough Mask, although it has no visible outlet, is drained by an underground stream that reappears in the springs of Cong. Through underground influences, also, lakes sometimes diminish in size and disappear altogether, or become bogs or morasses full of decayed vegetable matter.

The geology of Ireland is very imperfectly known owing to the enormous extent of boggy ground. Limestone and clay slates appear in the mountains. The coal deposits, of very poor quality, are in the south.

Course of Rivers. The principal river of Ireland and the longest in the United Kingdom is the Shannon, which rises in the Cuileagh Mountains and flows at first in a general southerly and then in a westerly direction, entering the Atlantic Ocean by an estuary ten miles in width and seventy miles in length. For a large portion of its course it forms the dividing line between Connaught and Leinster, and for another considerable stretch it separates County Clare from Counties Tipperary, Limerick, and Kerry. At certain points it expands into the Loughs Allen, Boderg, Ree, and Derg. The Shannon is 225 miles long and is navigable for about 140 miles. Its important tributaries are the Inny, Brosna, Mulkear, Deel, and Maigue rivers on the east and south, and the Boyle, Suck, and Fergus rivers on the west. The Shannon is connected with Dublin by the Grand Canal, 165½ miles long, extending from Shannon Harbor near Banagher, and by the Royal Canal, ninety-six miles long, from

Richmond Harbor in County Longford. Other important rivers are the Barrow, Blackwater, Suir, Nore, Bann, Foyle, Lagan, Boyne, Slaney, Liffey, Bandon, and Lee.

In the northeastern county of Antrim is the Giant's Causeway, a vast assemblage of columns of basaltic rock incessantly washed by the waves of the sea, the most widely known natural curiosity in Ireland. Geologists account for the marvelous regularity of these prisms by the large quantities of iron they contain. According to tradition the Giant's Causeway is the remnant of a road that formerly led into Scotland, and except that this causeway was not constructed by human hands the legend is true. The strait that now separates Ireland from Scotland, and which between the Mull of Kintyre and Benmore has a width of only fourteen miles, had no existence at the time when the volcanic agencies were most active.

IRISH JAUNTING CAR

Climate, Flora, and Fauna. The climate of Ireland, being directly modified by the warm waters of the Atlantic Ocean, is more equable than that of England or of Scotland. The mean temperature seldom falls below 40° in winter in any part of the island. At Dublin the mean temperature for the year is 49.2°, while at Valencia, in the south, it is 51°. The average annual precipitation is about forty inches, the rainfall being very uniformly distributed. The humidity of the climate exercises, unfortunately, a retarding influence upon the harvests. Wheat is seldom cut before the beginning of September, and not infrequently the harvest is postponed until October, while in wet seasons oats are cut in November. It is this humidity of the insular atmosphere that keeps the woods, fields, meadows, and gardens green and in full leaf, a peculiarity that has given to Ireland the name of the "Emerald Isle."

The remains of timber found in the bogs and the many names of places suggestive of woods and forests (such as Derry, "Grove of Oaks") prove that Ireland was once heavily forested, but wars and maladministration have so denuded the country that in some of the counties hardly a tree is to be seen. The principal indigenous trees are the oak, beech, pine, and birch. The broad-leafed myrtle grows in the southern counties, and other plants of Southern Europe flourish. The shamrock, a member of the trefoil family, is so common as to have been chosen as the popular Irish emblem. Except the red deer, still seen in the southwest, and the Irish hare, few wild animals are seen; and because of the lack of trees, not many birds of passage frequent the island.

KILLARY BAY, CONNEMARA

Killary Bay is the northern boundary of Connemara, a wild, mountainous region in County Galway, so called from the number of bays which indent its coast. Here the hardy Irish patriots centuries ago made their last stand against the encroachments of the English.

IRISH FLAX SPINNER

Throughout the flax-raising districts of Ireland the spinning-wheel and even the hand-loom are to the present day used among the peasantry.

Resources and Industries. Agriculture is the chief occupation of the people, its various branches engaging nearly one-half of the total population. About nine-tenths of the insular lands were confiscated during the reigns of James I., Cromwell, William III., and other sovereigns, and were bestowed upon English proprietors, by whose descendants the bulk of Irish real property is still held, reducing Irish farmers to the position of lessees. For several centuries the condition of the people was abject, but it is now improving, especially under the stimulus of laws passed by Parliament in recent years, which have greatly ameliorated the economic status of the tenantry. The crops in general are those best adapted to a moist climate such as Ireland possesses. In fertility, however, the soil is fully equal to that of England, if indeed it is not superior; about three-fourths of the surface of Ireland is arable, but more than one-half consists of pasture-lands. The most productive section is that known as the "Golden Vale," which occupies parts of Counties Limerick and Tipperary. Along the banks of the Shannon River also, the soil is extremely fertile, and the same is true of that of the basins of the Suir, the Nore, and the Barrow rivers. The red-bogs of the central lowland are underlaid with marls useful in reclaiming the land. In the mountain districts the extensive grazing-lands, owing to an abundant rainfall, are luxuriant, affording sustenance to large herds. Potatoes, the chief crop, constitute the principal food of the vast majority of the people; the other important crops are turnips, oats, barley, wheat, and flax. The last-named product is the sole industrial plant cultivated on a large scale in any part of the United Kingdom; it is grown mainly in the north of Ireland and affords the material basis for the flourishing linen establishments located in that section. The raising of live stock, especially cattle,

now forms the principal division of agricultural enterprise, and large quantities of butter and bacon are exported. The commercial minerals include mainly iron, coal, and peat. Deposits of gold, silver, lead, copper, marble, and other minerals are found, but are imperfectly utilized.

Among manufactures the textiles form the principal group, comprising a very large proportion of the exports; linens, laces, and poplins are the leading items. Shipbuilding is an important industry at Belfast, and flourishing distilleries and breweries exist in all of the large towns.

Historical. Setting ancient legends aside, the Irish people is now recognized as an aboriginal Celtic stock on which have been grafted the Saxon, Scottish, and English immigrants of a later day. Their darker complexion and certain physical and mental characteristics, however, still distinguish the Irish from the English and the Scotch. The Erse, a dialect of Celtic origin, is the native language, and its use is now confined chiefly to the western portion of the island. In the year 432 Christianity was introduced by St. Patrick, believed to have been a native of Scotland, who, educated in France and Rome, was sent by the Pope of that day to preach the gospel to the Irish. The country was divided into petty kingdoms, and from the 8th to the 12th century perpetual warfare existed between the various chiefs.

LAKES OF KILLARNEY, COUNTY KERRY

The Lakes of Killarney, in County Kerry, are famed for their picturesque beauty. They consist of the Upper Lake, two and one-half miles long; Muckross Lake, one and one-half miles long, connected by a winding stream with the Upper Lake; and Lough Leane, four miles long, fed by three streams from Muckross.

In 1175 Henry II., of England, subdued a portion of the country and apportioned it among his Anglo-Norman adherents. In time, however, these new governors came to regard themselves as Irish chieftains and to forget in great measure their loyalty to the English kings. Their descendants resisted the encroachments of the English until the close of the first decade of the 17th century and fomented continual revolts against the sovereignty of their feudal overlords. At length, however, the wars of extermination conducted by Elizabeth's generals and the colonization of Ulster by English settlers during the reign of James I. reduced Ireland to a condition of complete subjugation. The greatest change wrought by the counselors of James I. was the revolution in land tenure by which all the profitable lands of Ireland were parceled out among English courtiers. The native inhabitants, driven from their homes, were forced to take up dreary abodes among the mountains or the bogs. Moreover, they were persecuted for their religion, and the unjust discriminations against them resulted in the bitter rebellion of 1641, the force of which was not fully broken until Cromwell appeared upon the scene, and relentlessly subjugated the Irish people. The rising in behalf of the Stuart cause, in 1688, was crushed by King William. A continual persecution of the Catholics followed for over one hundred years, culminating in the futile rebellion, in 1798, headed by the order of "United Irishmen." In 1801 the parliamentary union between Great Britain and Ireland was effected, but the means used for its accomplishment were not satisfactory to a great majority of the Irish people. In 1829 the Roman Catholic Emancipation Act was passed and Roman Catholics were thenceforth permitted to sit in Parliament. The Irish Reform Bill, increasing the representation of Ireland in Parliament, was passed in 1832.

RUMBLING HOLE IN GLENARIFF

The land for miles inland from Red Bay, on the coast of County Antrim, is believed to have been at one time a sea beach. The streams of this beautiful district, known as Glenariff, often plunge into deep holes worn in the rock by the water These are called sluggas or rumbling holes.

The Modern Irish Question. In 1845 the population numbered 8,295,000, most of whom subsisted solely upon potatoes. In the succeeding year there was a great famine, owing to the failure of the potato crop. The loss of the crop, in spite of all the relief that could be given, resulted in the death by starvation of about 250,000 persons. Then followed an exodus of a large number of the people, the United States receiving most of the emigrants. Patriotic uprisings and secret unions had been common ever since 1798, and finally, through the efforts of a powerful secret society called the Fenians, the insurrection of 1867 broke out. Although this rebellion was speedily put down, the Fenian movement gave strength to popular discontent, and the leaders of English public opinion awakened to a sense of their duties toward the heavily afflicted country. The Irish Church, as the scheme of Anglican Church polity foisted upon Ireland by its English rulers had been called, was disestablished in 1869. Furthermore, in the following year there were laid the foundations of a much-desired reform in the Irish system of land occupation. These indications of the dawn of a happier era, however, did not by any means put an end to Irish political agitation. For many years the majority of the Irish have been seeking to regain that Home Rule which they lost at the beginning of the century through the "Act of Union," and this question has long been the most disturbing and prominent one in English politics. The Home Rule movement, which demanded a separate Parliament for Ireland, began in 1870 and soon rose into prominence. By 1874 the Home Rule party had acquired a strong

ROSS CASTLE, KILLARNEY

On Ross Island, in Lough Leane, are the ruins of Ross Castle, an ancient stronghold of the O'Donoghues. It was a place of importance in the war of 1641, and later was besieged and taken by Cromwell's soldiers.

representation in the British Parliament. Through the influence of that and other political organizations Parliament has since passed laws which have gradually improved the condition of Ireland, and although the population is steadily declining, having fallen off nearly 42 per cent between 1841 and 1901, prosperity seems of late years to be on the increase. Yet while recent land legislation has freed the Irish tenants to some extent from oppressive rents and has given them an opportunity of buying on reasonable terms the farms they till, the Irish Parliament has not been reëstablished.

Irish Cities. The most important cities of Ireland are Belfast, Dublin, Cork, Londonderry, and Limerick.

Belfast lies at the base of a chain of high hills that approaches the city from the south and terminates abruptly in Cave Hill, a precipitous eminence 1,158 feet in height. To the east lies Belfast Lough, at the head of which is a long bridge crossing the Lagan River at its mouth. Belfast is the manufacturing and commercial metropolis of Ulster and the center of all branches of the Irish linen industry. Shipbuilding is largely carried on, extensive shipyards being located on Queen s Island. Besides these industries Belfast has important iron foundries, flouring-mills, chemical works, breweries, etc.

THE MEETING OF THE WATERS, WICKLOW, LEINSTER COUNTY

The region of Wicklow is mountainous and very picturesque. Here, in the Vale of Avoca, where the Avonbeg and the Avonmore unite, is the scene of Tom Moore's lyric, "The Meeting of the Waters."

MINNAUN CLIFFS, ISLAND OF ACHILL

The Island of Achill, the largest off the Irish coast, is sixteen miles long and seven wide. The cliffs of Minnaun, or Menawn, rise 1,530 feet above the beach near the village of Keel, on the northeastern coast of the island.

Dublin, the capital, is situated on Dublin Bay and is divided into two sections by the Liffey River. The environment of the city is most attractive, particularly on the south, where the neighboring mountains with their fine scenery form a magnificent background. The river is crossed by nine bridges, some of which are imposing structures. Of the noteworthy buildings the Castle, completed in 1223, is historically the most interesting. A few hundred feet south of the Liffey, near Carlisle Bridge, is Dublin University, one of the greater educational institutions of the United Kingdom. Nelson's Pillar, which stands in the center of Sackville Street, commands an extensive view of the city. Dublin, although in the main an administrative municipality, has large breweries, mineral-water factories, chemical works, and other manufacturing establishments.

Cork is situated on the River Lee as it issues from the depths of a romantic wooded valley into a flat alluvial plain. The city has been described as "one of the most inconsistent cities in Ireland — a mixture of noble streets and broad quays with the very dirtiest of ill-paved lanes, the whole being set off by a charming frame of scenery that compensates for many a defect." The most famous building in Cork is St. Anne's Shandon Church, with its beautiful chimes, immortalized by "Father Prout" in the well-known lyric, "The Bells of Shandon"; other noteworthy edifices are Queen's College and the Court-House. Cork has woolen and linen manufactures and a considerable foreign trade.

Londonderry is situated on the west bank of the Foyle River near its expansion into the lough or bay of that name. The principal objects of interest are the town walls and the Cathedral, the former built in 1609 and the latter in 1633. From the tower of the Cathedral may be obtained a fine view of the city, embracing the walls, Walker's Monument, the Bishop's Palace, the docks, and the river. It is an important center of linen manufacture.

Limerick, lying within a broad plain watered by the Shannon near the point at which the river expands into a wide estuary, is the commercial center of the west. The chief objects of interest to the visitor are the Castle and the Cathedral. The trade of the city is extensive, especially in farm produce.

Government and Education. Executive authority is vested in a Lord-Lieutenant, who is a member of the Cabinet of the United Kingdom. Ireland is represented in the House of Lords by twenty-eight Irish peers and in the House of Commons by 103 members. All laws relating to the general government of the island are passed by the British Parliament.

The public primary schools are under the superintendence of a committee called The Board of National Commissioners of Education in Ireland. Schools are sectarian or of mixed denominational control; attendance is compulsory and free, but no pupil is required to receive religious instruction other than that approved by the parent or guardian. The leading institution for higher education is the University of Dublin, founded in 1591; the Royal University of Ireland, which is merely an examining body, was chartered in 1880. There is a Catholic University College at Dublin, and Queen's Colleges, founded in 1845, are located at Belfast, Cork, and Galway; but at all of these minor colleges the annual attendance is meager.

BANTRY BAY, COUNTY CORK

The Bay of Bantry is a beautiful sheet of water about twenty-five miles long, surrounded by high mountains. The town of Bantry, at the head of the bay, once a busy trading port, is now only a stopping place for tourists.

SPAIN

SPAIN, which with the Kingdom of Portugal occupies the westernmost of the three great southerly peninsulas of Europe, lies between 43° 45′ and 36° 1′ N. lat. and 9° 20′ W. and 3° 20′ E. long. It is the highest country in Europe in average elevation. On the north, mountains so effectually separate the country from the remainder of Europe as to have given birth to the French proverb, "Africa begins at the Pyrenees."

Coast-line and Islands. On the west and south Portugal possesses a portion of the peninsula coast-line and interposes a physical barrier to communication between Central Spain and the Atlantic Ocean; elsewhere Spain is bounded by the sea. The coast-line is exceedingly regular, with few marked indentations and with few off-lying islands. The Balearic Isles, the more important of which are Majorca, Minorca, Iviza, and Formentera, lie about 100 miles off the eastern coast. Their area is 1,860 square miles, which, with the 2,808 square miles of the Canary Islands and the thirteen square miles of area embraced in the Spanish presidios in Africa, is included in the 197,670 square miles comprised in the kingdom.

ALFONSO XIII. KING OF SPAIN

Alfonso XIII., the posthumous son of King Alfonso XII., succeeded to the title upon his birth, May 17, 1886. His mother, Maria Christina, was Regent during his minority. He became King in fact, May 17, 1902.

Geographically and geologically the peninsula is a unit. True, the political separation of Portugal from the Spanish five-sixths of the territory follows a general line of physical division, marked by the deep gorges of the Minho River in the north and the Guadiana River in the south, yet the two kingdoms may best be considered, in respect to configuration, as one country. The Iberian Peninsula rises by terraces from submarine depths to an average altitude of 2,200 feet. On all sides except the northeast and northwest the approach from the sea to the highlands lies across a narrow strip of low plain along the coast. The ascent to the Iberian Meseta, the plateau in which is comprised three-fourths of the area of Spain, is in general steep and difficult.

Table-land and Sierras. The central table-land, geologically the oldest portion of the peninsula, lies between two later formations, the Andalusian ranges on the south and the Pyrenees Mountains with their western extension, the Cantabrian Mountains, on the north. Two river basins, the valleys of the Ebro and the Guadalquivir, separate these folded mountain ranges of the north and south from the flat-lying strata of the central plateau, and in the three divisions thus marked off are to be found almost every species of geological formation, from the Archean to the modern Drift. Across the central highland lies a dividing range which starts at the west, not far from the mouth of the Tagus River, and extends across Portugal and Spain to the sierras of the Ebro watershed and the Iberian border range. Composing this dividing range are the Serra da Estrella in Portugal; the Sierra de Gata and

THE ESCORIÁL, ESCORIÁL DE ARRIBA, NEAR MADRID

Sierra de Gredos, the general direction of which is east and west; and the Sierra de Guadarrama, which extends in a northeasterly direction. The southern half of the table-land is subdivided by the Sierra de Guadalupe and the Montes de Toledo, and its southern margin is formed by the Sierra Morena, on the border of the great valley of the Guadalquivir. In the central eastern section in the Iberian border range the Meseta reaches its greatest altitude, the average elevation being from 3,000 to 5,000 feet over an area of 15,000 square miles. Thence the plateau slopes gently westward, and from about the center of Portugal the descent to the ocean is by a succession of terraces. In the south, likewise, the descent to the Guadalquivir Valley is gradual. The culminating peak in the peninsula, Mount Mulahacen (11,781 feet), is beyond the limits of the central table-land, near the western extremity of the Sierra Nevada, part of the Andalusian chain. The whole of the southern region is subject to earthquakes. To one of these disturbances the Iberian Peninsula owes its separation from Africa, by the formation of the Strait of Gibraltar.

VIEW ON THE TAGUS, TOLEDO

Toledo on the Tagus is built on a granite hill in the form of a horseshoe. The Tagus issues from the mountains through a deep gorge upon the fertile Vega north of the city; the name of the river, signifying cut, comes from this ravine.

THE MONASTERY, ON THE MONSERRAT, NEAR BARCELONA

The Monserrat (the "Serrated Mountain") rises with scarcely a foothill from the plain of Catalonia. The Monastery was founded in 880; but the older buildings have been abandoned for commodious new quarters.

Northern Spain, having for its frontier the Pyrenees, a mountain range second only to the Alps in Europe, abounds in scenery comparable only with that of Switzerland. However, although the absolute elevation above sea-level of the peaks of the central table-land is great, their height relative to the surrounding country frequently is so insignificant that the scenic value of the mountains is lost, as contrast is wanting. In the Pyrenees Mountains, on the other hand, great elevations rise from enormous depressions and the jagged peaks offer an imposing spectacle. Noteworthy among the distinctive features of the Pyrenees are the mighty cirques, or caldron-like depressions, characteristic of mountainous regions where glaciers in recent geological times have played an active part in giving form to the earth's surface. One of these, the Cirque of Barrosa, near the center of the Pyrenean range, is remarkably regular in outline. Near this cirque is Mont Perdu, a majestic peak 11,000 feet in height, and farther to the east is the Mont Blanc of the Pyrenees, the snow-capped group of Maladetta, the highest point of which, Pic de Nethou (11,170 feet), is the culminating peak of the Pyrenees Mountains.

Rivers and Lakes. The mountainous nature of the peninsula has determined the character of its rivers. Without exception they are of little or no value for purposes of navigation. Coursing through the uplands, the many streams are mere mountain torrents, small in volume but valuable for purposes of irrigation. The only mountain streams that become navigable even in their lower courses are those that flow through Portugal. Of the two long rivers that traverse lowland valleys, the Guadalquivir, which discharges into the Atlantic Ocean in the southwest, alone is of real service to commerce. For seventy miles from its mouth, or as far as Seville, it is a tidal stream and navigable for vessels of 3,000 tons. Extending diagonally across the peninsula in the northeast is another great lowland valley, that of the Ebro River, which receives the drainage from the Iberian border range and from the southern slopes of the Pyrenees and Cantabrian mountains. This river, although 450 miles long, is small in volume and is broken by rapids and choked by sandbars, so that it can be navigated only short distances and by small vessels.

The Ebro River drains the northeastern slopes of the Meseta, as does the Guadalquivir the southern. The work of draining the interior of the great table-land is accomplished by four rivers, the Guadiana, Tagus, Douro, and Minho, which follow essentially parallel courses from their head waters in the mountains to the Atlantic Ocean.

The only lakes of consequence in Spain are three coast lagoons—the Laguna de Janda, which lies east of Cape Trafalgar in Cadiz, the Mar Menor in Murcia, and the Laguna de Albufera in Valencia.

The Canary Islands, which constitute a separate province administered as an integral part of Spain, are a volcanic group off the northwestern coast of Africa,

THE ALCÁZAR, SEGOVIA

The Alcázar built by Alfonso VI., the sovereign of the Cid, is an excellent example of an old Castilian castle. It was here that Isabella the Catholic was proclaimed Queen of Castile in 1474.

between 27° and 30° N. lat. and 13° and 18° 30′ W. long. The principal islands are Tenerife, containing the famous Pico de Teyde, or Peak of Tenerife, 12,190 feet high; Gran Canaria, so called from the dogs found there; Palma, Fuerteventura, Lanzarote, Gomera, and Hierro (Ferro). The moisture carried by the trade-winds renders vegetation luxuriant except where the basaltic lava is of recent formation. The flora includes cactus-like euphorbias, the laurel, oak, and pine, and the banana, grape, and other fruits. The chief products of the islands are wine, oil, tobacco, and cochineal. The group was known to the ancients as the Fortunate Islands. It was acquired by Spain in 1479. The area of the islands is 2,808 square miles. Santa Cruz, in Tenerife, is the capital. Las Palmas, in Gran Canaria, is an important coaling-station.

Climate, Flora, and Fauna. The Iberian Peninsula has a climate of extremes in temperature and rainfall. The mountains around the coast condense the moisture borne by the winds from the sea, giving the maritime provinces an abundant precipitation, while the interior plateau and river valleys are almost rainless. The zone of widest variation in climate comprises the Iberian Plateau and the basin of the Ebro River. In the center of the plateau is Madrid (elevation 2,150 feet), the capital of the kingdom, where the range of temperature is the greatest in Western Europe. In summer the air on the plateau is superheated and rarefied. The winds, though blowing from the sea, have been deprived of their moisture by contact with the coast mountains. The intense heat of the sun's rays, with practically no evaporation, and the parching winds, often cause the temperature to rise to 107° in the shade. In winter the prevailing winds blow from the plateau toward the coast; the air is dry and the temperature extremely cold. The greatest precipitation occurs in winter, but the total annual rainfall is only fifteen inches. The widest average daily range of temperature is thirty-one degrees in July and August, almost as great as the difference between the winter and summer mean temperatures. The mean annual temperature is 56°. The Mediterranean provinces on the northeast, including the Balearic Isles, form a zone with a mean annual rainfall ranging between fourteen and twenty-seven inches and are subject to far less violent extremes of temperature than are the provinces of the plateau. The mean annual temperature is between 63° and 64°.

LA PUERTA JUDICIARIA, THE ALHAMBRA, GRANADA

The Puerta Judiciaria is a tower gateway of the Alhambra built in 1348. The name is the Spanish equivalent for the Moorish "Bêb Kharea," or Gate of the Law.

The African zone of Spain embraces the southern half of Murcia, the whole of Alicante, and all of Andalusia south of the Sierra Morena. Here the climate is subtropical, snow and frost being almost unknown. The summers are extremely warm and almost rainless, the winters are mild, and vegetation is luxuriant. With an average yearly rainfall of thirty inches, this region has a mean annual temperature of from 63° to 70°. This is the district visited by the scorching sirocco (Spanish *leveche*). In it, also, are included the *marismas* at the mouth of the Guadalquivir River, the most unhealthful region in Spain. With the exception of this marshy tract, however, and the rice swamps around the Laguna de Albufera, the entire peninsula is notably free from the malarial scourge that afflicts Italy. The maritime provinces of the north and northwest, with an equable climate and an abundant rainfall, constitute another climatic zone, the only region in Spain in which are found counterparts of the green meadows of England and the forests of Central Europe. The annual precipitation ranges between thirty-six and sixty-six inches, the mean annual temperature between 54° and 58°.

The forest area of Spain is small, constituting not more than 6 per cent (7,500,000 acres) of the entire surface. Characteristic forest trees found in various parts of Spain are the evergreen oak, the Spanish and Corsican pines, the chestnut, cork-oak, and date palm.

Insect, bird, and animal life are abundant and varied in the peninsula. In the province of Madrid alone are found more than 350 species of butterflies, many of them met with only in Spain. In the mountain regions are the eagle, vulture, and buzzard, while more widely distributed are the raven, chough, redstart, lark, pipit, oriole, curlew, quail, plover, ring-ouzel, wheatear, chat, and scores of other birds. Wolves are found in the mountains, and in the Cantabrian Range and the Estremadura Mountains the wild boar is hunted. Other characteristic wild animals are the lynx, fox, genet, wildcat, mongoos, ibex, deer, and badger.

Resources and Industries. Agriculture, grazing, and mining are the chief industries of Spain. Such is the unenterprising character of the inhabitants that mining alone flourishes, and that because it is mainly in foreign hands. Outside of America, the richest mines of quicksilver in the world are those of Spain, which are controlled by the famous banking-house of the Rothschilds. Near Huelva on the Rio Tinto is mined nearly one-quarter of all the copper produced in the world, but Englishmen have supplied the working capital. The development of the Almeria-Murcia copper-fields is due to English and French capital. More important yet is the Spanish output of lead and silver-lead ore. Nearly all the lead ore found is argentiferous, and silver free from lead occurs near Madrid and Córdoba. The purest lead ore is found in the southern slopes of the Sierra Morena, while rich deposits of silver-lead ore occur in the northern slopes and in the sierras near the coast of Granada, Almeria, and Murcia. Extensive deposits of these and other minerals in the interior lie untouched through lack of fuel and of easy communication with the seaboard. Coal is mined in considerable quantities, chiefly in the northern mountains and on both sides of the Sierra Morena. In addition there are valuable deposits of zinc, manganese, salt, gypsum, phosphorite, cobalt, sulphate of soda, and sulphur.

COURT OF THE LIONS, THE ALHAMBRA, GRANADA

The ruins of the beautiful palace of the Moorish kings, known as the Alhambra, are at Granada. The main court takes its name from the twelve lions which surround the fountain in its center. Marble columns support the fretted arches.

Nearly 80 per cent of the area of Spain is classified as of productive soil, and of this about 34 per cent is devoted to agriculture and gardens, 4 per cent to vineyards, 21 per cent to fruits, and 2 per cent

to olives. Intensive farming in some regions is carried to the point of impoverishing the soil, whereas in others, especially in the table-land, vast stretches of fertile land lie fallow. In the Mediterranean belt of orchards and market-gardens the rock is blasted and pulverized with hammers to form soil. Elaborate irrigation schemes and fertilizers in abundance are employed in order to secure the largest possible yield. The inhabitants of Catalonia, likewise, employ excellent methods in the tilling of their soil, which is remarkably fertile. In general, however, only the most primitive methods of tillage are pursued in Spain. Throughout Spain wheat is an important crop, having the greatest acreage and the largest yield. For all this, wheat has to be imported frequently in order to supply the needs for home consumption. Other important cereals raised are barley, rye, maize, and oats. The area devoted to vineyards comprises some 5,000,000 acres, and the annual wine product is large. The olive groves, too, occupy an area exceeding 2,500,000 acres and can be counted on for a large yield. Other products are flax, hemp, esparto, pulse, hazel-nuts, and oranges and other fruits. Broadly considered, the table-land is the granary of Spain; the maritime provinces, bordered by the Mediterranean Sea and the Atlantic Ocean, are its vineyard and orchard. On the moist lands of the northwest cattle are raised for export to England; in the arid wildernesses of the plateau sheep and goats are pastured; and in the evergreen-oak forests of Estremadura are found large droves of swine, while from Andalusia come the Spanish horses and the savage bulls employed in the national sport. The fisheries of Spain are important, especially the canning of sardines.

The development of manufacturing has not been commensurate with the natural wealth of the country. The metal-working industries, which in more enterprising countries follow naturally upon the opening of mines, are almost wholly wanting. Of the production of iron ore, for example, scarcely more than 15 per cent is smelted in Spain. The Spanish manufactures of cotton and woolen goods are considerable, but the silk industry is mainly under French control. Corks are manufactured extensively, but the cork groves of Catalonia and of the southern provinces have suffered irreparable damage from the carelessness with which the product has been gathered. Paper-making has attained a considerable development, especially in Catalonia. There are thirty-four glass factories in the kingdom.

Historical. The peninsula now comprising the kingdoms of Spain and Portugal, the aborigines of which were Celts and Iberians, was colonized along its southern coast by Phœnician traders long before it had ceased to be, to the Greeks and Romans, merely a land of mystery. Before the First Punic War Carthage had extended its protectorate to most of the Iberian tribes, and in 237 B. C., Hamilcar, father of Hannibal, crossed over to Spain with the determination of making the peninsula a Carthaginian province and a base of operations against Rome. New Carthage (Cartagena), probably founded by Hamilcar, became under his son-in-law, Hasdrubal, the flourishing capital of an empire, but the Carthaginians invited disaster when under Hannibal, Hasdrubal's successor, they attacked and took the Greek colony of Saguntum, which was in alliance with Rome. In the Second Punic War New Carthage was captured, 210 B. C., by Scipio Africanus Major and Roman rule in Hispania began.

A STREET IN ELCHE

Elche, an old town on the River Vinalapo, originally built by the Moors, has a very oriental appearance. Many of the Moorish buildings are still standing, and adjoining the city is a grove of 70,000 date palms planted by the Moors.

The territory remained under the Roman yoke for about six centuries; during this era occurred the invasion by the Franks A. D. 256. The overwhelming inundation by the Visigoths early in the 5th century marked the end of the period of Roman rule. At the beginning of the 7th century began that persecution and expulsion of the Jews which has had so great an influence in weakening the finances and dwarfing the industrial development of Spain. In 711 a band of 5,000 Arabs entered Spain bent on pillage. So easy was their victory over Roderick, "the last of the Goths," that they were encouraged to remain and make a conquest of the peninsula. Not until 755, however, were the quarreling Arabs, the Berbers (Moors), Egyptians, and Syrians consolidated in control of the country by the choice of Abd-al-Rahman as king.

The power of these invaders, known as Saracens, in time became weakened through a division of the country into independent principalities. Castile and Aragon seized the opportunity, and Christendom found a champion against the infidel in the person of Ruy or Rodrigo Diaz de Bivar, "The Cid," called also El Campeador, the traditional hero of Medieval Spain. The crusade gathered force in the 11th and succeeding centuries. The marriage of Ferdinand of Aragon and Isabella of Castile in 1469 united all of Christian Spain. The Saracens, first confined to Granada, were conquered in the year of the discovery of America.

The period of discovery and colonization in the Western Hemisphere, which followed the conquest of Granada, made Spain for a century the mistress of the world, but wars and dissension at home at last weakened the nation's hold on the supreme power in Europe. Moreover, one by one, in the four following centuries, the American possessions have been alienated, either by revolt, by foreign war, or by purchase, until, as a direct or an indirect result of the Spanish-American War of 1898, Spain has been deprived of the last of its colonies in America and in Asia, there remaining to the kingdom of the former great colonial empire only the insignificant possessions on the northern and western coasts of Africa. The war with the United States also brought disaster to the Spanish navy, its best ships being destroyed or captured.

Government. The monarchy which, except during the brief life of the republic of 1873, has been the prevailing form of government in Spain since the union of Aragon and Castile, became constitutional in 1876. The King is the executive; the law-making power, the King and the Cortes. The Cortes consists of two houses, Senate and Congress, equal in authority. The Upper House consists of a group of "Senators in their own right," of 100 nominated by the Crown (these two sections being limited in number to 180) and of 180 elected by the communes, provinces, and ecclesiastical and educational corporations, and by the largest payers of contributions. Among the Senators in their own right are represented the grandees of the kingdom, the admirals, the captains-general, and the higher prelates. Deputies to Congress are named by universal manhood suffrage in the proportion of one to every 50,000 inhabitants. The present sovereign is King Alfonso XIII. of the House of Bourbon, on whose posthumous birth, May 17, 1886, his mother, Queen Maria Christina, took oath as regent for the sixteen years of his minority. Alfonso XIII. formally assumed the reins of government May 17, 1902.

Population. The distribution of population in Spain is charac-

terized by a congestion in the towns and by a low density in the rural districts. Sixty per cent of the inhabitants dwell on the margin of the plateau. Vast areas are practically uninhabited and the country as a whole could support three times its present population. In 1897 the population was 18,089,500; the average density 91.5 to the square mile. The peninsular province of greatest density is Barcelona, with about 345 inhabitants to the square mile; that of least density is Cuenca, adjoining the province of Madrid on the southeast, with thirty-six inhabitants to the square mile.

Spanish Cities. Madrid has been the capital of Spain since the 16th century, when Philip II. chose it because of its command of the passes connecting the south of Spain with Old Castile and France, and also because of its position almost at the geographical center of the kingdom. Although surrounded by a bare and desolate country, the city itself has been beautified to such a degree as to earn for it the designation, "Paris in miniature." Modern Madrid, with its wide avenues and imposing palaces, is well laid out, but the ancient city is truly Oriental, with narrow, crooked streets and fantastically decked bazaars. Twenty-six miles northwest of Madrid is the Escorial, one of the most celebrated buildings in Spain, comprising a church, palace, monastery, and a mausoleum of the Spanish sovereigns. It was built by Philip II. to the memory of the martyred St. Lawrence. There the later kings of Spain lie buried.

Barcelona, on the coast of Catalonia, is the second city in population. It has flourishing manufactories, chiefly for cotton and other textiles. As a seaport it holds first rank, one-fourth of the foreign trade of Spain passing through this port on the Mediterranean Sea. Valencia, the third city in population, ranks next to Barcelona as a seaport. The Gothic Cathedral of Valencia, completed in 1482, is said to stand on the site of a former temple to Diana, which was supplanted by a Christian church and then by a Moorish mosque, from the tower of which The Cid is said to have surveyed the country he had won.

CONVENT OF SANTA MARIA LA RABIDA, NEAR HUELVA

In the convent of La Rabida Columbus was first welcomed when he came to Spain in 1485; and it was the Prior of La Rabida who, in 1491, sent the message to Queen Isabella which prevented Columbus from leaving Spain in despair, and led to the discovery of the new world.

CHURCH OF SAN GREGORIO, VALLADOLID

The entrance to the church of San Gregorio is a wonderful example of the combination of Moresque and Gothic decoration. Above the doorway is carved the royal coat of arms. Valladolid was long the summer residence of the Castilian kings. But the city is far more famous as the home of Cervantes, the author of Don Quixote.

Cartagena, with an excellent harbor, is the headquarters of the Spanish fleet in the Mediterranean. It is making slow but constant growth, owing to the development of the mineral deposits of Murcia and Almeria. Malaga, the next important seaport to the west, is declining in population. It is, however, an available outlet for the agricultural exports of the interior, chiefly wine and fruit. In recent years Malaga has grown in favor as a health resort.

The chief towns of Andalusia are Seville, at the head of navigation on the Guadalquivir River; Cadiz, virtually commanding with its fortifications the mouth of that river; and Cördoba, long vying with Seville for supremacy in the valley. Seville is famous for its Gothic Cathedral, the Moorish Palace of the Alcazar, and its art treasures; Cördoba for a mosque, one of the finest examples of Moorish ecclesiastical architecture. Near Cadiz is Jerez, which gives its name to the sherry wine produced in the surrounding district.

Granada, in Upper Andalusia, is famous as the last stronghold of the Moors in Spain, and the preservation of the Alhambra, in which Moresque architecture reached its culminating excellence, makes the city a Mecca for art-loving travelers.

Ferrol, at the northwestern angle of the peninsula, is the principal Atlantic naval station of the Spanish Government. The town is built on a rocky headland and is fortified from the land side. So narrow is the channel that only one warship can enter at a time. Bilbao, on the northern coast, ranks next to Barcelona and Valencia as a seaport;

RUINS OF ROMAN AQUEDUCT NEAR TARRAGONA

This was built by the Romans probably just before the opening of the Christian era, to bring water some twenty-two miles from the Gaya River. After a long period of disuse, the aqueduct was restored in the eighteenth century.

FACHADO DEL PALACIO DEL ALCAZAR, SEVILLE

This, the main façade of the palace, forms one side of the Patio de la Monteria (Court of the Royal Lifeguards). The Moorish Alcazar built by Taludi in 1181, on the ruins of the Roman Praetorium, has been almost hidden by successive additions; but the architecture still retains a Moresque character.

The town lies on both sides of the Nervion River, which, from this point to its mouth, has been rendered navigable and takes the name of the city. Ships of 4,000 tons' burden can enter the river at high tide; breakwaters have been erected at its mouth, and the destructive inundations are rendered impossible. The minerals, for which the Basque provinces have been celebrated from antiquity, are the basis of the prosperity of the city. Here to a greater degree than elsewhere in Spain metallurgy has been developed, and there are extensive manufactures of glass and chemicals. San Sebastian, a flourishing seaport in the Basque province of Guipúzcoa, is an important fortress and the most fashionable seaside resort in Spain. Among the many famous watering places in Europe San Sebastian especially is notable for the beauty of its situation; it is the summer residence of King Alfonso XIII. and Queen Maria Christina. It is another port from which Basque mineral products are exported. Santander, also an important seaport and a fashionable watering-place on the northern coast, is delightfully situated on a sheltered bay of its own name, enclosed by picturesque hills; the city is the see of a bishop. It has exports of iron ore, wine, olives, and flour produced in the Castiles.

A VIEW OF GIBRALTAR

Religion and Education. Practically the entire population of Spain is of the Roman Catholic faith, that being the State religion. Restricted liberty of worship is permitted Protestants, but religious services must be private and without public announcement. Illiteracy is general. Under the education law of 1857 instruction supposedly is compulsory, but the terms of the statute have never been enforced. Secondary education devolves on the middle-class institutions, largely attended but inefficient. There are nine universities, namely, at Barcelona, Granada, Madrid, Salamanca, Santiago, Seville, Valencia, Valladolid, and Saragossa. The State contributes large sums to the aid of education.

GIBRALTAR AND ANDORRA

Gibraltar. Of the "Pillars of Hercules," the promontories which guard the Strait of Gibraltar on the north and south, and which for the ancients marked the limits of the civilized world, only one remains in the possession of Spain, namely, Ceuta on the African side. Gibraltar—the *Mons Calpe* of the ancients—although geographically a part of Spain, has been since 1704 a stronghold of England. It was taken by the Moors on their first incursion into Spain in 711, and by them given the name it now bears, Jebel-el-Tarik, or hill of Tarik, which was that of the Arab conqueror. Ceded to Spain by the Moors in 1462 it passed to the British during the War of Succession. It is a Crown Colony, the government resting entirely with the Governor, who is also Commander-in-Chief. The rock is six miles in circumference and has an area of 1,266 acres. It consists of a mass of brownish-gray limestone or marble, rising to the height of 1,439 feet, its rugged sides being almost perpendicular on the south and east. The northern side, also, is almost impossible of access from the narrow isthmus or neutral ground that connects it with Spain. The town, situated on the west side, which shelves down to the bay, still retains its Spanish character. The fortress, which in 1779–82 sustained a siege by the combined forces of Spain and France, has been made practically impregnable by recent extensions and improvements of the fortifications, while the harbor's utility as a naval base will be largely enhanced by the extension of docks and moles now under way.

Andorra. Andorra, which for more than one thousand years has maintained its independence, is situated on the southern slope of the Pyrenees. The territory of the "Valleys and Sovereignty" of Andorra, which lies between the Spanish province of Lerida and the French department of Ariège, comprises the upper part of the Balira, a tributary of the Segre, and parts of two or three other Pyrenean valleys. It has an area of 175 square miles. The inhabitants, about 6,000 in number, speak a Catalan dialect. Difficult of approach from both France and Spain, Andorra is a hotbed for smugglers between the two countries. Its only resources are agriculture and grazing. The so-called republic is governed by a Council elected by the heads of families. The Syndic or President serves for one year. The Spanish Bishop of Urgel and the French Republic exercise certain rights of suzerainty without interfering with the liberties of the people, who cling with devotion to their ancient privileges and to the simple ways of their ancestors.

OLIVE TREES BY THE MEDITERRANEAN

The wild olive thrives luxuriantly along the Mediterranean coast, attaining great size. The trees, with their gnarled and fantastic branches, and the silvery gray green of their foliage are a picturesque feature of the landscape and soften the contour of shores otherwise barren and rugged.

PORTUGAL

THE KINGDOM OF PORTUGAL lies between 36° 57′ and 42° 8′ N. lat. and 6° 12′ and 9° 30′ W. long. The length of the country, from north to south, is about 360 miles; its average breadth, about 100 miles. Regarded as an integral part of the kingdom, also, are the Azores Islands, 740 miles from the coast, and the Madeira Islands, about 500 miles distant. Continental Portugal, with an area of 34,528 square miles, is divided into six provinces. The area of the Azores is 1,005 square miles; of the Madeira Islands, 505 square miles.

In its mountain ridges and its rivers, Portugal is but a continuation of Spain. All of the important rivers in the kingdom have their sources beyond the frontier, and the mountains of Traz-os-Montes north of the Douro River, those of Beira between the Douro and Tagus rivers, and the Alemtejo Mountain system south of the Tagus River, combine to demonstrate the topographical continuity of the peninsula. The highest of the elevations is the summit of the Serra da Estrella, which has an altitude of 6,532 feet.

DOM CARLOS OF PORTUGAL

Carlos I. became King of Portugal in 1889. He married in 1886 Marie Amelie, daughter of Philippe Duc d'Orléans. Luiz Philippe, a lad of sixteen, is the present heir to the throne.

Climate, Flora, and Fauna. In proportion to its size, Portugal, as compared with Spain, has an abundance of lowland. Differences of elevation are responsible for considerable variations in climate, but the fact that the country receives the moisture-bearing westerly winds before they strike the mountain rim of the great plateau serves in general to temper extremes of heat, at the same time providing sufficient precipitation for an abundant vegetation, while proximity to the ocean has a tendency to make the winters mild. The mean annual temperature in the north is about 50°; in Beira it reaches 62°; below the Tagus River, where the hot African winds are felt, the mean annual temperature is above 64°. Snow seldom falls, except in the extreme north and on the mountains, and frosts occur only in clear weather when the winds are from the east. The mean annual rainfall at Oporto is about fifty-two inches; at Lagos, on the southern coast, about twenty inches.

The flora and fauna of Portugal and Spain are practically identical, and Portugal, like Spain, exhibits a wide diversity of geological formations and possesses great mineral wealth. Coal deposits, however, are so limited that many valuable mineral veins remain unworked for want of fuel. The most important mines are those of copper in Alemtejo and of iron in Moncoryo. There is a considerable output of ores of sulphur, lead, tin, antimony, and manganese. Slate, lime, salt, gypsum, and marble are exported.

THE CLOISTERS OF ST JEROME AT BELEM

The Monastery of St. Jerome was founded by King Emmanuel I. in commemoration of the successful voyage of Vasco da Gama in 1449. In the church of Santa Maria, at the southeast angle of the monastery, are buried the great king and the great explorer. Here also is the tomb of Camoens. The ornate Gothic style of architecture is best shown in the Cloisters, which were designed by the famous architect João de Castilho.

Farming and Manufactures. As in the case of Spain, the agricultural resources of Portugal, although great, have never been fully developed. Antiquated methods and machinery are employed, and it is asserted that the 45.8 per cent of area classed as waste land comprises between 5,000,000 and 10,000,000 acres that might be cultivated. The most important single article of product is wine, of which some 24,000,000 gallons are annually exported. The rich red wine known as "port" takes its name from Oporto, whence great quantities are shipped to other lands. Port-wine constitutes one-third of the Portuguese vintage. Other leading agricultural products are wheat, barley, oats, maize, flax, and hemp on the uplands, and oranges, lemons, citrons, olives, figs, almonds, and rice on the lowlands. Extensive forests of pine, oak, chestnut, and cork constitute one of the rich resources of the country. Portugal of late has become a considerable exporter of live stock, and cattle-raising as an occupation is extending year by year. Fishing for salmon and lamprey in the Minho River at the north, for tunny along the Algarve coast at the south, and for sardines at various points, engage many vessels and men, and yield a large return.

The past decade has witnessed a remarkable revival of the Portuguese manufactures. In Lisbon, Oporto, and elsewhere are many cotton, woolen, silk, and linen mills, and the output of lace from Peniche, Setubal, and the Azores is important. Metallurgical industries have developed considerably. The manufacture of filigrees in gold and silver is carried on at Oporto. Among other manufactures, glass, china, and paper are the most important, while the firing of Moresque tiles is successfully pursued in Lisbon and Oporto, as it was by the Mohammedan invaders who originated the industry.

Population, Religion, and Schools. The population of Portugal (5,400,000), excluding the Azores and Madeira islands, has an average density of nearly 136 inhabitants to the square mile. Along the coast the density in some districts rises to 400 to the square mile. The Roman Catholic faith is the State religion; freedom of worship, limited as in Spain, is permitted persons of other creeds. Education is nominally compulsory, but the law is not enforced and the percentage of illiteracy is high. Nearly 80 per cent of the population can neither read nor write. There are several thousand public primary schools, besides many private institutions of the same rank. Normal schools are being established in the chief towns, in which there are also State lycées.

Cities. Lisbon, the capital, is built on one of the finest natural harbors in the world, near the mouth of the Tagus. Commanding the narrow entrance to this broad anchorage are the only thoroughly modern fortifications of which Portugal can boast. Lisbon, for beauty of position, is accorded third place among European cities, only Constantinople and Naples excelling in this regard. Notorious a century ago for filth and dilapidation, the Portuguese capital has now become one of the cleanest cities of the continent. The rehabilitation of the town is in large measure due to its misfortunes. Visited often in the past by plagues and earthquakes, Lisbon suffered its crowning calamity in November, 1755, when the entire western half of the city was laid in ruins by an earthquake. An accompanying tidal wave wrecked shipping in the harbor and destructive fires followed. It was estimated that between 30,000 and 40,000 persons lost their lives and that the property loss was nearly $100,000,000. Improvement has marked the process of gradual restoration, and the Lisbon of to-day is a hundredfold more beautiful than the city that was laid waste.

CASTELLO DA PENA, CINTRA

Crowning the wooded promontory which rises behind Cintra is the Castello da Pena. Ferdinand II. (1836-53) built it for a summer palace, on the site of King Emmanuel's monastic prison (1503).

Oporto, second in point of size, is Portugal's chief manufacturing town. The name O Porto signifies "The Port," and this city, the Portus Cale of the Romans, has given its name to the entire country. Pine-covered mountains encircle the point at the mouth of the Douro River where the city has grown up, and the crowding together of houses on the hillsides gives the effect of a city of terraces.

Azores and Madeiras. The Azores and Madeira islands, as already noted, are now formally classed not as colonies, but as integral parts of Portugal. They are known as "The Adjacent Islands." The Azores, a group of nine islands in the North Atlantic Ocean, have a temperate climate and produce oranges, pineapples, cereals, wine, alcohol, butter, cheese, and live stock. The Madeiras have a remarkably salubrious climate. Madeira, the principal island of the group, is known widely as a sanitarium. The principal products are wine, cereals, sugar, laces, woven straw and wicker work, and manufactures of inlaid wood. Their greatest elevation is Pico Ruivo, 6,060 feet. Both archipelagoes are volcanic.

Historical. During its early history Portugal was but a part of Spain. When in 1094 Alfonso VI, King of Leon, Castile, and Galicia, combined his fiefs of Coimbra and Oporto in one great county, which he conferred on Henry of Burgundy, the history of Portugal as a separate State began. Count Henry's son, Alfonso Henriques, for the space of twelve years waged Portugal's war for the independence of Galicia, and it was he who became first ruler of the kingdom. The House of Burgundy retained the crown until 1385, when the people of Portugal, revolting at the projected union with Castile, elected as king Dom João, illegitimate son of the grandfather of the heiress to the throne. The century and a half that followed, with the House of Aviz holding the throne, was the period of Portugal's greatest power.

Decline began, however, in 1521, with the accession of João III. In 1580 the Spanish Duke of Alva entered Portugal with an army, and Philip II. of Spain, son of Charles V., was declared king. In 1640 came revolt against Spanish rule, the crowning of the legitimate heir, the Duke of Braganza, as King João IV., and then, for a quarter of a century, a struggle, finally successful, for independence. In 1853 the crown passed to Pedro V., the first representative of the House of Braganza-Coburg, which still (1903) holds supreme authority in the person of Dom Carlos I.

QUADRANGLE OF THE UNIVERSITY, COIMBRA

The University has occupied since 1540 the site of the old royal palace rebuilt by King Emmanuel. The library contains many valuable manuscripts taken from suppressed monasteries. About 1,400 students are in attendance, whose degrees are still conferred in accordance with the ceremonial prescribed by John I. in 1431.

Government. Constitutional government in Portugal dates back to the "charter" granted by Pedro IV. in 1826, which has been altered and liberalized by later Acts of the Assembly. The King, as executive, has a responsible cabinet of seven members. Legislative authority is vested in the Cortes Geraes, composed of a House of Peers and a House of Commons. The latter only is elective.

FRANCE

FRANCE, a republic of Western Europe, lies between 42° 20′ and 51° 6′ N. lat. and 7° 39′ E. and 4° 50′ W. long.; its area, including that of the island of Corsica and several small islands along the coast, is 204,092 square miles. It is bounded by the English Channel, the Strait of Dover, and Belgium on the north; Germany, Switzerland, and Italy, separated by mountains, are on the east; to the south lie the Mediterranean Sea and Spain, while the western shore is washed by the Bay of Biscay and the Atlantic Ocean.

M. ÉMILE LOUBET

M. Émile Loubet was elected President of France in 1899. For over twenty years he had honorably served the State in various offices, and his policy as President has been broad and statesmanlike.

Surface—Mountains. Geographically France is separable into two sections uniting at a line drawn from the southwestern extremity of the country to the northeastern border of the Ardenne, the western division comprising the more level portions and the eastern and major division embracing a great plateau with five well-defined mountain-chains. The elevation of the country averages about 1,000 feet, but the western portion, which embraces more than one-half of the entire surface, lies in general considerably below 650 feet. Central France consists largely of a great highland region called the Central Plateau, which, beginning at the northwest with an elevation of from 1,500 to 2,000 feet, ascends regularly toward the southeast until it approaches the Mediterranean coast, near which it abruptly terminates in the Cevennes Mountains, a range varying from 2,500 to 5,500 feet in height. Southwest of the Central Plateau is the Basin of Aquitaine, comprising the valley of the Garonne and Adour rivers. North of the Central Plateau lies the Paris Basin, wherein are situated the richest agricultural lands of France. The Paris Basin is bounded on the west by the Armorican Peninsula, a region of low-lying hills that is practically an extension of the great central plain. Along the eastern border of France rises a series of plateaus ascending to the summits of the Western Alps and the Jura and Vosges mountains.

The great mountain-chains of France are five in number — the Pyrenees, separating the republic from Spain; the Cevennes, in the southeastern part; the Western Alps, lying between France and Italy; the Jura Mountains, located mainly on the Swiss border; and the Vosges, extending north and south between the Moselle and Rhine rivers and forming a part of the eastern boundary. The Pyrenees, with a height of from 6,500 to 11,000 feet, extend a distance of 350 miles across the entire southern frontier. They have a width of from 40 to 100 miles and cover an area of 21,000 square miles; the greatest elevation is Vignemale (10,820 feet). The limits of the Cevennes Mountains are indeterminate; the name is often applied to the entire series of ranges stretching from the foothills of the northern spurs of the Pyrenees to the depression south of the Côte d'Or, but in the narrowest sense the group consists only of the ranges that lie within the department of Lozère. The Western Alps form a crescent-like range having an average height of about 7,700 feet; here, within French territory, rise the highest of the Alpine peaks, Mont Blanc (15,780 feet) and the Barre des Écrins (13,460 feet). The Jura Mountains extend in a general northeasterly direction mainly on the border between France and Switzerland; their principal summits are Crêt de la Neige (5,655 feet), Colombier de Gex (5,550 feet), and Mont Tendre (5,515 feet). The Vosges Mountains extend from a point near the southern limit of the Franco-German frontier to the valley of the Pfrimm River in Germany, forming in their southern section a part of the boundary.

River Courses. The principal rivers of France are the Loire, Rhone, Seine, Garonne, and Dordogne. The Loire River rises in the department of Ardèche and discharges into the Bay of Biscay at St. Nazaire in the department of Loire-Inférieure; its length is 543 miles, and it is navigable for large ships as far as Nantes. The Rhone River has its source in a great glacier on Mont St. Gothard in Switzerland; thence it flows through Switzerland and France, until it approaches the Gulf of Lyons into which it empties by several branches, forming the delta called the Ile de la Camargue. Its length is 504 miles and it is navigable as far as Châlon. The Seine rises in Mont Tasselot in the department of Côte d'Or and after a course of 480 miles discharges into the English Channel by an

LE MUSEE DE CLUNY, PARIS

This famous museum of medieval antiquities is housed in the Hôtel de Cluny. The latter, built by the Abbey of Cluny during the 15th and 16th centuries, upon the site of an ancient Roman palace, became one of the residences of the Kings of France. It is interesting to note that Mary, sister of Henry VIII. and widow of Louis XII., was the first royal tenant.

estuary seven miles wide; it is navigable for large ocean steamers to Rouen and for smaller sea-going vessels as far as Paris. The Garonne originates in the Spanish Pyrenees and, after a course of 400 miles, enters the Atlantic Ocean by the great estuary of the Gironde; ocean vessels can ascend the stream as far as Bordeaux. From Toulouse the river is connected with the Mediterranean Sea by the Canal du Midi. The Dordogne is formed by the union of the Dor and Dogne rivers at the base of Mont Dore and joins the Garonne 260 miles from its head; it is navigable for 167 miles.

The noteworthy tributaries of the Rhone are the Saône, Isère, and Durance; those of the Seine are the Marne and Oise. The Saône rises in the department of Vosges and trends in a southerly direction as far as Lyons, where it unites with the Rhone; of its total length (300 miles) 232 miles are navigable. The Isère rises on the northern declivity of Mont Iseran in the department of Savoie, and after a tortuous course of 150 miles, of which about two-thirds afford waterway facilities, joins the Rhone near Valence. The Durance, a stream of little value as a waterway, has a course of 160 miles from its source near Mont Genèvre in the department of Hautes-Alpes to its union with the Rhone near Avignon.

THE PANTHÉON, PARIS

According to tradition, the Panthéon marks the burial place of Ste. Geneviève, the patron saint of Paris. It was built in the opening years of the Revolution, and, having served alternately as church and temple, is now a national memorial hall.

THE PALACE OF VERSAILLES, VERSAILLES

Eleven miles southwest of Paris lies Versailles, an unimportant village until in 1682 Louis XIV. began to build the great palace which was to be his summer residence. This view given, from the Court of Honor, conveys a very inadequate idea of the extent and magnificence of the buildings. The national history, not only of France, but of America and Germany, centers about Versailles. Here, in 1783, was signed the treaty whereby Great Britain acknowledged the independence of the United States of America; here, in the memorable year 1789, met the Third Estate which framed the first Republican Constitution of France; and here, almost a century later, King William of Prussia was proclaimed Emperor of a united Germany.

The Marne River rises in the department of Haute-Marne and, flowing first north and then west for 325 miles, reaches the Seine at Charenton; its navigable length is about 200 miles, but by means of lateral canals steamboats can ascend to St. Dizier, 238 miles. The Oise is formed by two streams and, after a southwesterly course of 186 miles from their confluence, discharges into the Seine above Conflans; it is navigable from Chauny.

The other rivers deserving of particular notice are the Scheldt, Meuse, Moselle, Somme, and Adour. The Scheldt River rises in the department of Aisne, flowing to the northeast, passes out of France near St. Amand-les-Eaux, thence traverses Belgium and the Netherlands, entering the North Sea near Flushing; it is navigable for river vessels to Cambrai (210 miles) and for ocean steamships to Antwerp, Belgium, its total length being 270 miles. The Meuse River takes its rise in the department of Haute-Marne and flows toward the north; it leaves French territory in the department of Ardennes and ultimately unites with the left arm of the Rhone, which is known as the Waal; its total course is 575 miles, of which 305 miles lie within the borders of France. Navigation begins at Troussey, 440 miles from the mouth of the river. The Moselle River rises in the department of Vosges and, flowing northward, passes out of France near Pont-à-Mousson, thence through German territory until it unites with the Rhine in Prussia; the length of the river is 320 miles and it becomes navigable from the point where it receives the Meurthe River, 106 miles from its head waters. The Somme has its source in the department of Aisne, and after a westerly course of 147 miles flows into the English Channel between Le Crotoy and St. Valery. The Adour takes its rise in the Pyrenees and trends first northward and then westward, emptying into the Bay of Biscay at Bayonne; of its course of 208 miles only about two-fifths is of service to navigators.

Lakes — Geology. Lakes are numerous, but few are of large dimensions. The Lake of Geneva, being situated only partly within French territory, can not properly be classed with the lakes of France; the largest inland basins lying wholly within the country are the Alpine lakes of Bourget and Annecy in the departments of Savoie and Haute-Savoie. The remaining lakes, comprising mountain and plain basins and coast lagoons, are of insignificant size.

THE PETIT TRIANON, VERSAILLES

Back of the palace lie the famous gardens of Versailles, laid out with geometric precision in ponds, lawns, flower beds, groves, terraces, walks, and fountains. Adjoining the park is the Petit Trianon, a beautiful rustic villa built by Louis XV., and intimately associated with the memory of Marie Antoinette.

The soils of France vary widely, according to the geological history of the different localities. The Paris Basin contains numerous varieties of soils, which have been distributed through its sections with singular regularity. Northern France was once the bed of a lake, which ultimately subsided and was succeeded by the rivers that now water its plains. The

bottom of the basin was filled up from the outer edge toward the middle, and generally throughout this region the deposits of successive geological ages, originally laid in regular strata, were tilted up and now lie exposed, cropping out as concentric girdles. Within the girdles dry and permeable plateaus of closely compacted limestone frequently alternate with low, clayey areas covered partly with meadow and partly with forest. Often a soil especially suited to agriculture is succeeded by a sandy zone, which in turn gives way to a region of smooth and bare chalk hills. Outside of the Paris Basin the soils are less diversified; the Central Plateau in general, including the Armorican region, is stony and ill-adapted to the purposes of the husbandman. Granitic and metamorphic rocks characterize the formations found in the mountain ranges, and show plain traces of volcanic action. In the valleys the secondary formations exist, filled in with Tertiary deposits, the latter abounding in fossil remains. Around the mouth of the Rhone the district is alluvial.

PANORAMA OF PARIS

This view presents the older part of the city and the left bank of the Seine. In the foreground stands Notre Dame, while against the sky looms the dome of the Panthéon.

Climate, Flora, and Fauna. The climate of France is temperate but by no means uniform. Since the mountains are mostly located in the eastern division, the mild, moist winds from the west, tempered by the warm currents of the Atlantic Ocean, are not arrested in their course until they have passed over the greater part of the country. Nevertheless, the proximity of the snow-fields of Switzerland and of the continental plains of Germany causes a wide range of temperature; at Paris the mean annual temperature is 51.4°, the mean of summer being 66° and that of winter 36.3°. Winter temperature as low as 13° has been recorded. While at the mouth of the Loire frosts are rare, the higher Alps are always capped with snow; in fact, as one descends from the lofty Alpine plateau to the lowlands of the Paris Basin he meets with almost every variety of climate from the subpolar to the subtropical. The mean annual rainfall ranges from 19½ inches along the Mediterranean Sea to the remarkable maximum of seventy-one inches in the western corner of the Pyrenees.

BOIS DE BOULOGNE. LE GRAND LAC

The Bois, until 1848 a forest belonging to the crown, has since been converted into a beautiful city park.

The flora of France is unusually varied. About one-sixth of the surface is covered with forests, and timber areas exist in almost every department. Over the greater part of the country the oak, beech, lime, hornbeam, and maple are the prevalent forest species. The Eucalyptus, introduced from Australia, flourishes in the southeast, as do also the indigenous olive and mulberry. The wild animals are becoming extinct; the only species that still abound are the wolf and wild boar. Silkworms and bees are extensively raised in the south, and fish, such as tunny, herring, and sardines, are caught in large quantities along the coast.

PONT AU CHANGE AND PALACE OF JUSTICE

The bridge derives its name from the money-changers' booths which lined it in the Middle Ages. Leading as it does to the modern Board of Trade, this name is still appropriate. The Palace, to the right, was presented by Charles VII. to the Parlement, or supreme court of France, in 1431. In the old conciergerie, farthest from the bridge, Louis XVI. and his unfortunate queen, Marie Antoinette, were confined at the opening of the Révolution.

Resources and Industries. More than two-thirds of the total area of France is devoted to agriculture, which furnishes employment to nearly one-half of the population. The agricultural lands mainly are in the hands of peasant proprietors, who are distinguished for their industry. Of the arable land more than one-half is devoted to cereals. The average annual yield of wheat

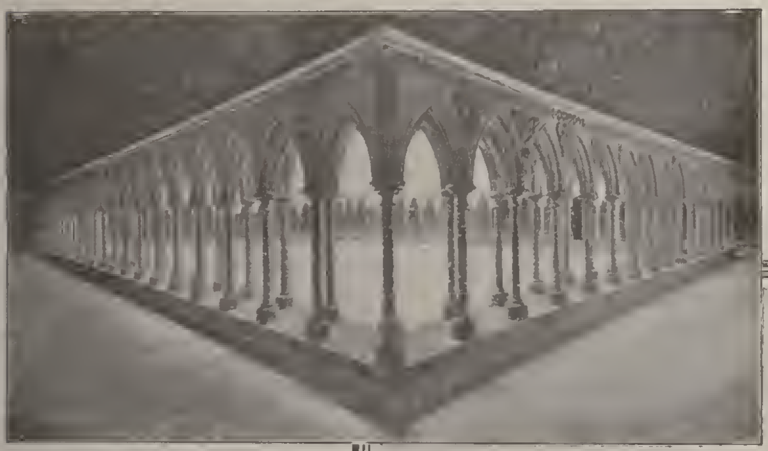
exceeds 330,000,000 bushels; yet so great is the domestic consumption of this grain that it is imported in considerable quantities from the United States and Russia. Other important items of grain produce are maize, barley, oats, rye, and buckwheat. The principal remaining crops comprise beet-root, potatoes, rape, flax, hemp, grapes (for the making of wine), tobacco, clover, and hay. Beet-root, used in the manufacture both of sugar and of alcohol, is extensively cultivated. The market-gardens of Provence, Agenais, and Anjou furnish fruits and early vegetables for the Paris markets, and Brittany exports a large proportion of its early produce to London. The raising of horses and cattle forms an important department of agricultural industry on the coast of Flanders and in Normandy, Perche, and other localities. Sheep are raised in Champagne, and in the summer vast numbers of these animals graze in the natural pastures of the Alps and the Cevennes. Dairying is extensively and profitably pursued in Boulonais, Brittany, the Central Plateau, and the Jura; certain kinds of cheese are exported largely. In the production of wine France exceeds both Spain and Italy, the output being nearly 2,000,000,000 gallons annually. Grape culture is now chiefly confined to the valleys of the Saône and the Rhone and to Lower Languedoc and Bordelais. In connection with the vine the mulberry is grown in the valley of the Rhone, the olive in Provence, and the orange in the vicinity of Nice.

THE CATHEDRAL OF NOTRE DAME, CHARTRES

Chartres is one of the oldest towns in France, dating back to the time of the Druids, who had their college here. The Cathedral, built in the 12th and 13th centuries, is especially famous for its richly stained medieval windows.

The chief mineral products are iron and coal, but the supply of the latter is not equal to the demand and great quantities are imported from England, Belgium, and Russia. The remaining economic minerals, consisting principally of building stones, salt, zinc, lead, copper, nickel, and antimony, are comparatively unimportant.

Manufactures and Trade. As a manufacturing country France has for many centuries maintained a high rank. The textiles, including articles made of silk, cotton, wool, hemp, flax, and jute, form the principal division of the manufacturing industries. Establishments for the manufacture of linen, hemp, jute, and cotton goods are most numerous in the department of Nord. Lyons is unsurpassed throughout the world as a center of the silk trade, and St. Étienne has made the manufacture of ribbons a distinctive industry.



CLOISTERS OF ST. MICHEL ABBEY

In the valley of the Isère are numerous glove factories and paper-works. The annual output of the beet-root sugar establishments has greatly increased in recent years, and now reaches over a million tons yearly. Other manufactures of importance include flour, leather, guns, porcelain crystal, carpets, and mirrors.

The appropriations made by the Government for the encouragement of fisheries have greatly stimulated that industry, and fishing is actively pursued both along the coast and in the rivers.

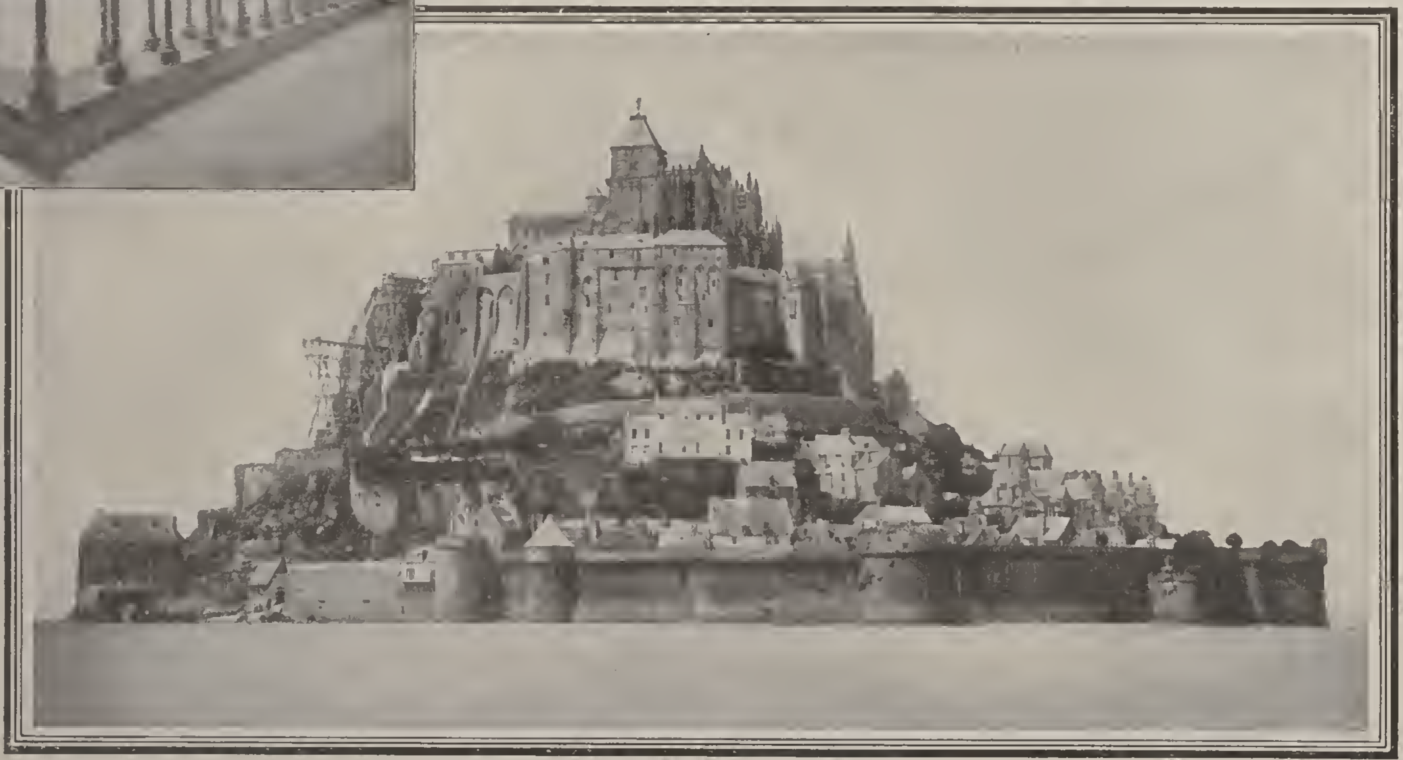
ST. ÉTIENNE, CAEN, IN NORMANDY

St. Étienne of the Abbaye aux Hommes, founded by William the Conqueror, is a companion church to La Trinite of the Abbaye aux Dames, founded by Matilda, his wife, in 1066.

The export trade of France is declining, the imports now being considerably in excess of the exports. The chief articles of import are coal, wool, cotton, silk, timber, oil-seeds, hides and furs, cereals, and wines; the principal commodities exported are woolen, silk, and cotton fabrics, raw wool, raw silk, wines, skins and furs, leather, linen and clothing, and manufactured specialties.

The natural waterways of France have a navigable length of 7,660 miles, and the great canals, which have been constructed either to connect the larger rivers or to furnish new channels of communication, afford 3,021 additional miles of navigation. Of the artificial waterways the Canal du Midi is the longest. It extends from Toulouse on the Garonne River to Cette on the Mediterranean Sea, a distance of 150 miles.

Historical. France corresponds very closely to the region called by the Romans Gallia Transalpina, which embraced a great stretch of territory bounded by the Rhine, the Atlantic, the Pyrenees, the Mediterranean, and the Alps. The development of France really begins with Clovis I. or Chlodwig, chief of the Franks, who in 486 established his sway over the greater part of



MONT ST. MICHEL, NORMANDY

Mont St. Michel is a small village on a rocky isle in the Bay of St. Michel, on the coast of Normandy. The abbey crowning the summit of the rock was founded in the 8th century, and was a famous place of pilgrimage.

the territory now known as France, and founded the Merovingian dynasty, which closed in 752 with the accession of Pepin the Short, the first of the Carlovingians. His son Charlemagne, who was crowned Emperor of the West in 800, was an enthusiastic promoter of Christian civilization and letters and extended his dominions until they reached from the Ebro to the Raab and from the Eider to the Garigliano. Not long after his death the great empire was divided into three parts, and although reunited under the reign of Charles the Fat, it fell into decay on the death of that impotent prince in 888. In the reign of Charles the Simple (898–922) the Northmen established themselves on the lower Seine, thus creating the great Duchy of Normandy.

In 987 Hugh Capet was elected King, but his rule was in reality restricted to the Duchy of France, which lay between the Somme and the Loire rivers, and the greater part of the country was governed by dukes who recognized the King as official suzerain but conceded to him no actual authority. From this time until the 14th century the various monarchs occupied themselves in extending the borders and centralizing the government of the country.

CHAMOUNIX AND MONT BLANC

Chamounix, famous for the grandeur of its surroundings, is situated at the base of Mont Blanc (15,730 feet), the "Monarch of the Alps," and within easy reach of glaciers unsurpassed in Europe. Fifteen thousand tourists visit Chamounix every year.

ETRETAT

Etretat is a picturesque watering-place on the north coast of France, very popular among artists. Behind the villas of the town tower a line of cliffs 300 feet high, and in front is a wide sea beach. A certain part of the beach is allotted to the fishermen.

But during the reign of Philip VI. (1328–50), the first of the House of Valois, began the hundred years' struggle with England for the crown of France. Through the wonderful leadership of Joan of Arc the invaders were finally driven from the kingdom and Charles VII. crowned at Reims (1422).

The growth of the country was next retarded by bitter civil wars between Huguenots and Protestants, culminating in the massacre of St. Bartholomew, August 24, 1572. In 1589, Henry of Navarre, by renouncing his faith in favor of Catholicism, ultimately introduced harmony into the divided realm. Like his predecessor, he was assassinated (1610) and his son was proclaimed King as Louis XIII. However, the real master of France during the reign of Louis was the famous Cardinal Richelieu. With the accession of Louis XIV. (1642) there began the greatest era in the history of the French monarchy; the territorial possessions of the country were enlarged and the people prospered. Nevertheless the close of the Grand Siècle, as the era of Louis XIV. was called, found the nation exhausted and in debt. The succeeding reigns, characterized by reckless extravagance and folly, plunged the country into hopeless misery.

FISHERMAN'S BOAT-HOUSE ETRETAT

DOMRÉMY-LA-PUCELLE

Here, January 6, 1412, Joan of Arc was born.

In 1789, oppressed beyond the possibility of endurance, the populace rose against the King (Louis XVI.), and the terrible events that followed belong to universal as well as to French history. In 1792 the First Republic was established, and the helpless King beheaded (January 21, 1793). Napoleon Bonaparte now rose into prominence through his marvelous campaign in Italy, in 1799 made himself master of France, and in 1804 became Emperor of the French. Wars, conducted on a vast scale and with wonderful military genius, occupied the greater part of the reign of Napoleon, until a disastrous campaign against Russia in 1812 led to his first banishment (1814) and to his final overthrow (1815).

The restoration of the Bourbons immediately succeeded in the person of Louis XVIII., brother of Louis XVI. The new government was characterized by undue severity and general incapacity on the part of the royal ministers, and at the death of Louis and the accession of his brother, Charles X., sullen discontent prevailed throughout the country. In 1830 King Charles was forced to abdicate and Louis Philippe, Duke of Orleans, was elected in his stead.

The new monarch, although he endeavored to institute order in the faction-ridden land, was finally forced to leave the country in 1848.

The Second Republic was now proclaimed, and Louis Napoleon Bonaparte, nephew of Napoleon I., became the first president. On December 2, 1851, the President assumed dictatorial power, and a year later became Emperor Napoleon III. The new ruler was an absolute monarch, yet during his reign the country prospered and its internal strife temporarily ceased. But in 1870 Napoleon engaged in war with Prussia, which resulted in Napoleon's surrender at Sedan and Germany's winning the province of Alsace and a part of the province of Lorraine. From the ruins of the Second Empire rose the Third Republic, which gives every promise of stability. Louis A. Thiers became the first president of the regenerated Commonwealth (1871). Subsequent incidents of general interest in French history have been the international expositions held at Paris in 1889 and 1900, the Panama scandal of 1892–93, arising out of frauds in connection with the operations of the Panama Canal Company, the assassination of President Carnot by an Italian anarchist in 1894, and the Dreyfus scandal arising out of the arrest, conviction, and imprisonment for high treason of Capt. Alfred Dreyfus of the Intelligence Corps, and subsequent revelations, culminating in 1899 in the return of Captain Dreyfus from exile and his ultimate pardon.

MONT BLANC—CROSSING THE CREVASSE

The ascent of Mont Blanc usually takes three days, and experienced guides as well as a level head are required to make it. Jacques Balmat was the first man to reach the top, in 1786. Owing to the great height of the summit, the view, even when the outlook is unclouded, is always indistinct and disappointing.

People and Cities. According to the census of 1901, France had a population of 38,641,333, and contained thirty-seven cities with more than 50,000 inhabitants and fifteen cities with more than 100,000 inhabitants. Paris, the capital of France and the third in size among the cities of the world, is situated on both banks of the Seine River. Historically and architecturally it ranks with Athens and Rome as one of the three most wonderful cities of the world. On La Cité Island stands the Cathedral of Notre Dame, an edifice which dates from the 12th and 13th centuries. Not far from it is located the Palais de Justice with its ancient royal chapel finished in 1248. The Hôtel de Cluny contains a great archæological museum. The Louvre is a masterpiece of Renaissance architecture and contains unsurpassed collections of art, especially in the works of Italian, Flemish, and Spanish painters. Other important public structures are the Palais du Luxembourg, which contains the Chamber of the Senate and a gallery for contemporary French artists; the Palais Bourbon, once occupied by the Condé family, now the Chamber of Deputies; the Palais de'l Elysée, the residence of the President; the Institut de France, where the French Academy holds its sessions; the Théâtre Français; the Panthéon, and the Bibliothéque Nationale (National Library), second only to the British Museum in extent and value of collections. Among the public squares the most noted is the Place de la Concorde, connecting the gardens of the Tuileries with the Champs-Elysées. The squares are the points of convergence of the great boulevards, those masterpieces of landscape art. The manufacturing and industrial activity lies chiefly in the suburbs and neighboring towns. Paris is, however, preëminently the home of the fine arts and excels in the production of wares requiring taste and special skill.

TEMPLE OF JANUS—AUTUN

Autun, the Bibracte of Cæsar's Gaul, is one of the most ancient towns in France. Numerous Roman ruins, among them the so-called Temple of Janus, attest its former importance.

Marseilles, the second city of France, is the leading seaport of the republic, having maintained from Roman colonial days a commanding commercial position on the Mediterranean Sea. The Prado, lined with magnificent trees and ornate villas, and the Corniche Road, following the windings of the coast, afford extended prospects of the harbor and the picturesque promontories that surround it. The imports include grain, coal, oil-seeds, raw silk, cocoons, and silk waste, raw sugar, hides and skins, and cotton; the most important items of export are manufactured goods (mainly textiles), grain, and wine.

Lyons, situated at the junction of the Rhone and Saône rivers in Southeastern France, is one of the great manufacturing cities of the world. Near the center of the city are situated the Church of Ainay, dating from the 10th and 11th centuries; the Place Bellecour, with a statue of Louis XIV.; and the ancient Cathedral of St. Nizier. The chief items of local manufacture are silk products, in which Lyons leads the cities of the world; other manufactures include mainly machinery, leather, starch, and fine wares made of copper, bronze, and iron. These products, together with wines and the arms and ribbons of St. Étienne, furnish the basis for an extensive trade.

Bordeaux, the chief city in the department of Gironde, is situated on the left bank of the Garonne River. Points of interest are the Place de la Comédie, the busiest point in the city; the Grand Théâtre, one of the most beautiful edifices of its kind in the world, and the remains of an ancient Roman amphitheater. From its excellent harbor the city carries on an important commerce with the ports along the Atlantic Coast and even with those of Africa and India. The exports consist mainly of wines, brandy, fish, and fruit; the imports of cotton goods, iron, coal, and timber. There are shipbuilding yards and establishments for the manufacture of preserved meats and porcelain. The

BIRTHPLACE OF NAPOLEON, CORSICA

Ajaccio, climbing hardily up the steep slopes from the bay towards the snow-capped peaks above, is a typical Corsican town, picturesque and unprogressive. But the historic interest which centers around Napoleon will not soon wane. Although the house in which he was born was burned, the town is full of relics and reminders of the "Little Corporal."

wines of Bordeaux have been famous for their rare quality since the 4th century.

Lille, the fifth city in order of population, is situated on the Deule, a small tributary of the Scheldt. The fortifications, built by Vauban, are said to be the masterpiece of that great engineer. A great museum of art was opened in 1892. It contains a valuable collection of paintings, statues, and architectural designs, the latter including a number of drawings by Michelangelo. The principal manufactures are flax and hemp yarn, linen thread, cloths, table-linen, cotton goods, tulle, and chemicals, and in the vicinity are bleaching-grounds, rapeseed-oil mills, and beet-root plantations, the products of which are shipped to the markets of the world.

Toulouse is situated in a fertile plain on the right bank of the Garonne in the department of Haute-Garonne. The chief architectural monument of Toulouse is the Church of St. Sernin, one of the most beautiful Romanesque religious edifices in existence. The city is an important point of distribution for the agricultural products of southern France, especially grain and wine. Its leading manufactures are tobacco, cannons, refined copper and iron, carriages, paper, and stained glass.

St. Étienne, the capital of the department of Loire, is a prosperous manufacturing city and the center of the largest coal-field of Southern France, to which it owes its rapid development. The principal manufactured products are weapons, cutlery, and ribbons; the National Arms factory located here employs 10,000 workmen, while in the School of Mines are educated nearly all of the engineers employed in the industries of the surrounding district.

Le Havre, situated at the mouth of the Seine River, is second only to Marseilles in importance as a seaport. Shipbuilding and sugar-refining are pursued on an extensive scale.

Nantes lies on both banks of the Loire River in the department of Loire-Inférieure. The more noteworthy structures of the city are the old Castle with its six romantic towers, the Palais des Arts containing various museums, and the Palais de Justice. There are important establishments for the manufacture of sugar and tobacco and the preservation of sardines and meats, and in the vicinity are many iron-works, cotton-mills, and glass-works, and several shipyards.

TURRET, HOUSE OF JACQUES CŒUR, BOURGES

The octagonal turret of the grand stairway is only one detail of the richly ornamented 15th-century house, built by the famous silversmith of Charles VII.

Nice, situated about fifty miles from the extreme eastern point of France, is one of the largest winter health-resorts in the far-famed Riviera.

Roubaix, in the department of Nord, five miles northeast of Lille, is an important industrial city and has extensive manufactures of wool, cotton, silk, and dyes. The city has two museums and is the seat of an industrial school for weaving.

Rouen, located on the Seine in the department of Seine-Inférieure, possesses great charm for the lover of medieval architecture. Its public buildings include the Palais de Justice, erected in the 15th century; the Cathedral, a noble edifice of Gothic design, dating mainly from 1270–80; and the Church of St. Ouen, a fine specimen of true Gothic architecture. Rouen is also an important manufacturing and commercial municipality. Cotton goods are so extensively produced that the city has been called the Manchester of France.

THE PALACE OF JUSTICE, ROUEN

This is a late Gothic structure of the 15th century, illustrating well the ornate taste of the time. Not far from the Palace of Justice is the Tower of Joan of Arc, where she was tried and condemned to the stake.

THE PORT OF LE HAVRE

The advantageous position of Le Havre, at the mouth of the Seine, has made it the seaport of Paris, and second only to Marseilles in importance. In recent years Le Havre has been greatly improved, and in appearance is now a handsome modern town. It is the birthplace of Bernardin de St. Pierre.

Reims, situated in the department of Marne, abounds in historic associations and contains several ancient edifices of great interest to the visitor. Among the latter should be specially mentioned the Cathedral of Notre Dame; the Archiepiscopal Palace, containing the ancient banquet-hall of the French kings and the apartment they used before their coronation; the Abbey of St. Remi, and the Porte de Mars, a triple triumphal arch of Roman construction. The city is the leading center of the trade in champagne and has valuable woolen manufactures.

Nancy, situated on the Meurthe River in the department of Meurthe-et-Moselle, contains large establishments for the manufacture of cotton and woolen goods, embroidery, hats, shoes, pottery, and glass.

Toulon, a Mediterranean seaport in the department of Var, is the chief station of the French fleet on that historic sea and possesses an excellent harbor with five basins.

Government and Education. France has been a republic since September 4, 1870, under a constitution

confirmed February 25 and July 16, 1875, and since partially modified. This constitution vests the executive authority in the President and his Ministry and the legislative power in a Chamber of Deputies and a Senate. The President is elected for a term of seven years by a majority of both the Senate and the Chamber of Deputies voting as a unit. The Chamber of Deputies is composed of 584 members elected by universal suffrage for four years from the various arrondissements; members must be citizens and not under twenty-five years of age. The Senate consists of 300 members elected for a term of nine years from citizens whose age is at least forty years, one-third retiring every three years. Election of Senators is indirect and is effected by an electoral college composed, first, of delegates chosen by the municipal councils of communes in proportion to their respective populations, and second, of the Senators, Deputies, and general and district councilors of the departments. The two chambers assemble every year.

MARSEILLES—VIEW OF THE HARBOR AND NOTRE DAME DE LA GARDE

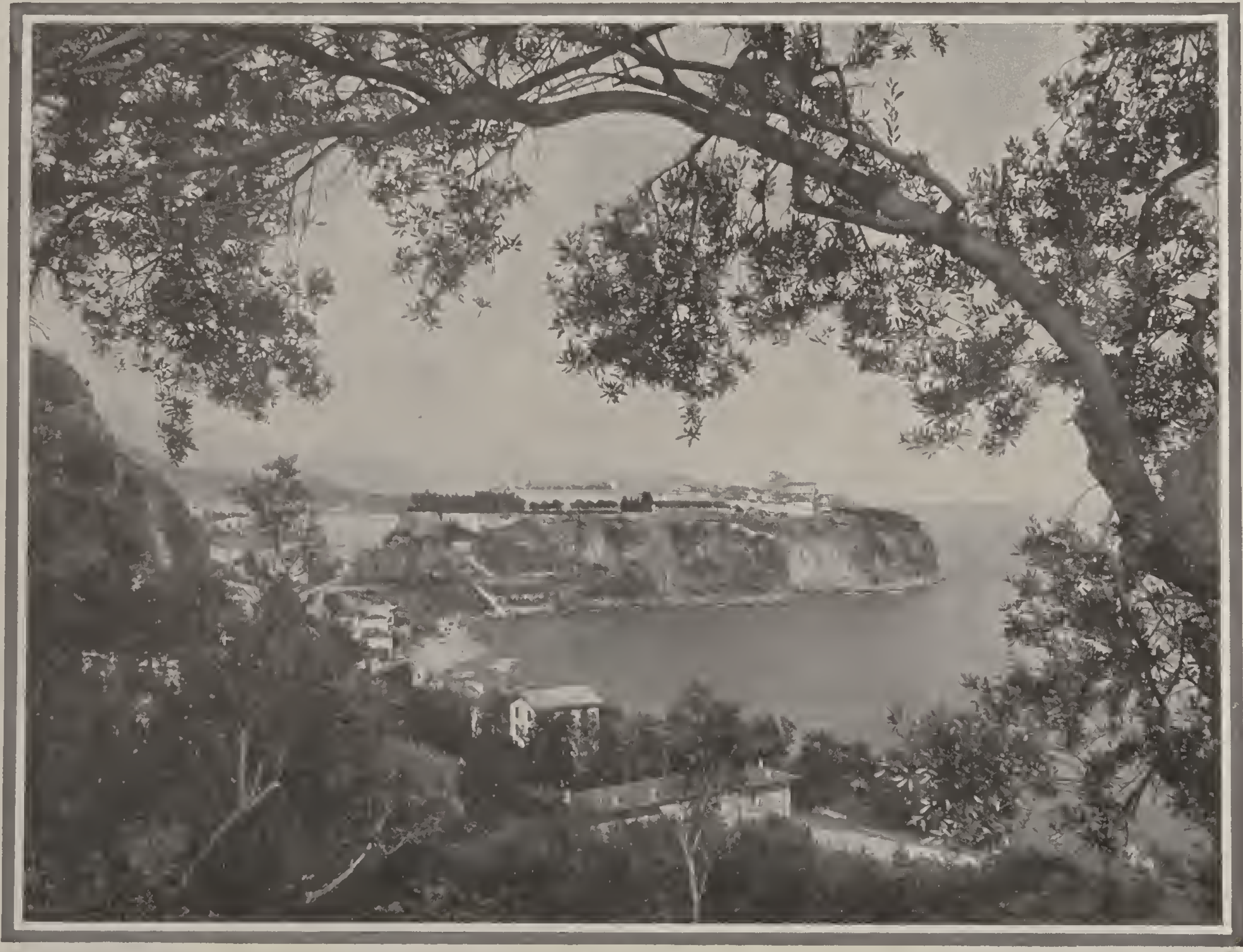
The busy harbor of Marseilles, the leading seaport of France and of the Mediterranean, continually crowded with shipping from all parts of the world, presents an animated and an ever-varying scene. The church of Notre Dame de la Garde crowns a fortified hill south of the harbor. The medieval church, once the resort of pilgrims, has been replaced by a spacious modern building.

All grades of instruction are afforded by the State and by its public school system every section is reached. There are numbers of primary schools, also evening schools for adults, the most of these being conducted by teachers paid by the State. Secondary instruction is furnished by state and communal colleges and by institutions under the control of private associations or individuals. The great universities give instructions in letters, theology, science, law, medicine, and pharmacy. The chief universities are those of Paris, Lyons, Bordeaux, Montpellier, Lille, Nancy, and Rennes.

Colonies and Dependencies. The colonies and dependencies of France, including Algeria and Tunis, embrace an area of about 3,981,000 square miles and contain a population of nearly 51,600,000. However, Algeria, administratively, is treated as a part of France, and Tunis is controlled by the Ministry of Foreign Affairs. The government of the colonies proper is directed by a member of the French cabinet, but each colony has an appointed governor. The older colonies are represented in the Parliament of the Republic. In colonial administration France, with methods characteristic of the Latin race, has not shown the powers of successful management that have been demonstrated by the British and the Dutch. Many of the French colonies, even some of the more important ones, continue to be a burden on the home exchequer.

MONACO

Monaco, the smallest of the sovereign principalities of Europe, lies on the Mediterranean Sea, inclosed in the French department of Alpes-Maritimes. It has an area of only eight square miles and a population in 1900 of about 15,000. Its history can be traced back to the 10th century when it belonged to the Genoese house of Grimaldi, and embraced a territory that was larger by one-third than the principality as at present constituted. It was annexed to France soon after the commencement of the French Revolution, but was restored to its original proprietors in 1814, and placed under the protection of Sardinia. When Nice was transferred to France in 1860 the principality again passed under French protection, and in the following year the two towns of Mentone and Roquebrune, which had already revolted from the authority of the Prince, were sold to France. Public affairs are directed by the Prince in conjunction with a Governor-General and a Council of State, who derive their powers from the Crown. No church, except the Roman Catholic, is permitted to exist within the borders of the principality. Exclusive of the "guard of honor," seventy-five men constitute the entire military force. The principality has its own coinage and postage stamps.



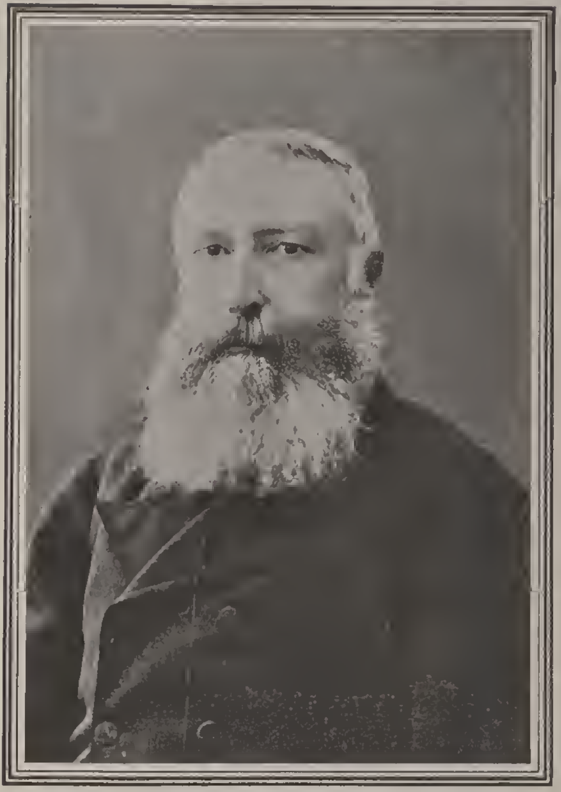
MONACO

Monaco, a diminutive principality within French territory, embraces the towns of Monaco, the capital; Condamine, a charming health resort in winter, with great popularity as a sea-bathing place in summer; and Monte Carlo, widely known for its delightful climate but chiefly famous for its gaming facilities. The popularity of Monte Carlo has led to a wonderful improvement of its naturally beautiful surroundings, until to-day the little principality is perhaps the most delightful locality in Europe.

The town of Monaco, one of the most beautiful spots on the Mediterranean coast, is situated on the level summit of a rocky headland, 195 feet above the ocean. Just east of it is Monte Carlo, which has been the great gambling resort of Europe since 1860. The games are controlled by a stock company which in return for a concession expiring in 1947 pays the Prince a large annuity. Perfumes, olive oil, oranges, and citrons are exported, but the industries and trade of the principality are unimportant.

BELGIUM

THE KINGDOM OF BELGIUM, which derives its name from that of the Belgæ or Belgian Gauls, whom Cæsar found in possession of the district between the Rhine and the Scheldt rivers, lies between 49° 30′ and 51° 30′ N. lat. and 2° 32′ and 6° 7′ E. long. The North Sea forms the northwestern boundary, but on all other sides are land frontiers. On the north is the Netherlands, on the east Germany and the Grand Duchy of Luxemburg, while on the southwest is the frontier of France. The area of Belgium is 11,373 square miles.



KING LEOPOLD II.

Leopold II., King of the Belgians, ascended the throne December 10, 1865, when he was thirty years of age. His Queen, Marie Henriette, who died September 19, 1902, was a princess of the royal house of Austria.

Both in configuration and in geological structure the surface of Belgium presents far more variety than does that of Holland. Along the forty-two miles of coast and throughout the northern part are the same lowlands, requiring drainage to render them suitable for agriculture; while sand-dunes protect the low shore from storm and dikes from flood. Toward the southeast, however, higher lands and even broken country appear until, in the provinces of Liège, Luxemburg, and Namur, south of the Meuse and Sambre rivers, is reached the wild, mountainous district that rises to the plateau of Ardennes, with a maximum elevation of 2,230 feet. Beyond the alluvial and diluvial deposits of the coast, extending as far north as the province of Antwerp and stretching across the whole breadth of the country, are Tertiary formations, including yellow sand, argillaceous sands, coarse limestones, and clay available for brick-making. The Secondary strata are represented in fire-clay and white and brown chalks and marls along the Geer and Haine rivers, while the Primary strata of the Ardennes Plateau yield the minerals to which Belgium in large measure owes its prosperity.

Course of the Rivers. Two great rivers, the Scheldt and the Meuse, having their sources in France, enter Belgium on the southwestern border and traverse the country in a northeasterly direction. The Scheldt River, with its tributaries, drains most of the low plain of Western Belgium. It is navigable for the whole of the 108 miles of its course through Belgium, but its flow is regulated by locks as far north as Ghent. At Ghent the Scheldt makes a great bend to the east, then turns north, and then back to the west, reaching the North Sea at the Dutch port of Flushing, northwest of Ghent. Across the bend the Belgians have cut a canal from Ghent to the lower mouth of the Scheldt, and another affords communication between Ghent and Ostend by way of Bruges. Many other canals have been constructed in this and other parts of the northern provinces for the purposes of commerce, drainage, and irrigation, and some of the shallower rivers, as the Meuse, have been made navigable by being converted into canals. So slightly indented is the Belgian coast that in the whole of its extent there is not a single serviceable harbor; for this reason, Antwerp, a river port on the Scheldt, is used for the shipping industry.

The climate is cool and temperate. The mean annual temperature for the country is only 50°, and even on the high plateau of the Ardennes the mean does not fall below 45°. Rain falls, on the average, 195 days in the year. In countries as densely peopled as Belgium and the Netherlands little that is representative and original can be recognized in the flora and fauna. There are few wild plants left and no wild animals.

Resources and Industries. Belgium is remarkable for its wealth and the activity of its commerce and industrial enterprises, which are due in part to important natural resources, in part to the industry of the inhabitants, but in large measure to the intelligence with which the State has fostered agriculture, manufactures, and trade.

In the development of the Kongo Independent State in Central Africa, of which King Leopold II. is founder and sovereign, an important market for the trade of the kingdom has been opened up. By the King's will executed in 1889, Belgium will inherit all His Majesty's property rights in the Kongo, and the treaty of 1890 between the Independent State and Belgium made possible the annexation of the State after 1900. In China likewise, the Government is endeavoring to extend Belgian commerce.

Of the 7,278,550 acres that comprise the area of Belgium 65.06 per cent are devoted to agriculture, 5.75 per cent are uncultivated, 17.7 per cent are under forest, and 11.49 per cent are roads, marshes, rivers, etc. The principal agricultural products are wheat, barley, oats, rye, potatoes, beets, tobacco, flax, hemp, and colza, and the leading fruits are apples and plums. Although by far the larger part of the people are engaged in agriculture, the production of cereals is not sufficient to supply the domestic demand. Within recent years the agricultural interests in Belgium have been greatly improved by King Leopold's efforts in behalf of scientific farming. The King appoints an Agricultural Commission for each province, which devotes itself to the interest peculiar to its district. Delegates from these commissions with specialists compose the Superior Council of Agriculture, which has a general supervision of the interests of husbandry.

THE ROYAL PALACE

The Royal Palace, Brussels, an elaborate Gothic structure, was built in 1514-25, and was for many years occupied by Government authorities. In 1876, the building was repaired and fitted up for municipal offices.

PALACE OF JUSTICE, BRUSSELS, BELGIUM

The Palace of Justice is a magnificent building, perhaps the noblest example of modern architecture in the world. It was begun in 1866, and opened in 1883, to celebrate the fiftieth Jubilee of Belgian existence as a separate kingdom. The area of building is 270,000 square feet.

The manufactures are the chief source of the industrial wealth of the country. The vast mineral wealth of Southern Belgium is directly responsible for metallurgical industries of all kinds. The textile manufactures

are also of great value. Throughout Northern Belgium the manufacture of cotton and woolen yarns and goods, linens, and cloths is highly developed, while the Belgian laces have a world-wide fame. The chief centers of the last-named industry are Ghent, Louvain, and Bruges. About 130,000 women find employment in lace-making, the value of their work amounting to about $10,000,000 annually.

The import values in Belgium's trade considerably exceed those of her exports. The chief articles imported are cereals and raw textiles. The principal articles of export are woolen yarn, textile fabrics, iron and steel, firearms, machinery, glass, hides, and drugs and chemicals. Nearly 90 per cent of the extensive railways of Belgium are operated by the State.

Important Cities. Belgium is one of the most densely populated countries of the continent, having 6,693,500 inhabitants, or about an average of 593 to the square mile.

The centers of industry are shifting to Liège, Namur, and other Walloon towns lying in the midst of the rich coal and iron districts. The manufacturing prosperity of the country is owing in large measure to the fact that the deposits of iron cover the coal-fields, for fuel is at hand for the simultaneous development of the mineral strata. The provinces of Hainaut, Namur, and Liège contain the largest coal-fields, the dividing line between the two fields being in Namur.

Brussels, the capital, is situated on the Senne River in the province of Brabant, almost in the center of the kingdom. Despite

CANAL VIEW AND THE BEGUINAGE, BRUGES

The Beguinage (or convent) at Bruges was founded in the 13th century. Crossing a bridge over the Ghent Canal, the convent is entered through a gateway built in 1776, which opens into a shady court. Bruges is a city of bridges, hence its name.

its important trade in lace, artistic furniture, carriages, bronzes, and manufactures of leather, Brussels commercially falls behind many of the less populous cities of the kingdom. It is as the residence of the royal family, as the seat of government, as the social center of the country, and as a city devoted to art that Brussels holds its high place among Belgian cities. The capital is more Parisian than Flemish. In the upper or new town, the highest and most attractive part of the city, the nobility and gentry and the English colony have their residences. The old town, comprising the north-western districts, traversed by canals and branches of the Senne, stands on low ground, is damp and unhealthful, and is devoted almost entirely to the industries of the city. Many of the canals have been vaulted over and converted into driveways, and a system of beautiful boulevards, 4½ miles long, marks the location of the ramparts of ancient Brussels. In the lower part of the town is the famous Hotel de Ville, which, with the medieval guild-houses, is among the few relics of the city's former glory. The battle-field of Waterloo is only twelve miles south of Brussels, and one of the most beautiful of the boulevards of the capital, in the southern or upper portion of the town, commemorates in its name the downfall of Napoleon. Near the Boulevard de Waterloo stands the most ambitious architectural pile in the kingdom and one of the grandest of modern times, the Palace of Justice, completed in 1883 at a cost of $10,000,000. It covers an area of 270,000 square feet, greater than the ground space occupied by St. Peter's Basilica at Rome. Brussels is the seat of a university founded in 1834 by the leaders of the Liberal party in opposition to the Catholic University of Louvain.

Antwerp, the commercial capital of Belgium, is situated on the Scheldt River about forty-seven miles from its mouth. The city was founded in the 7th century. In the 16th century Antwerp was the wealthiest and the most important commercial city of Europe, but the ruin wrought by the Spanish about 1576 and the imposition by the Dutch (1648) of navigation duties on the Scheldt River, diverted trade to Amsterdam. The revival of its prosperity dates from 1863, when the navigation of the Scheldt was made free. The most important industries of Antwerp are diamond-cutting, lace-making, cigar-making, the refining of sugar, brewing, and distilling. The chief imports are wheat, coffee, hops, tobacco, wool, hides, petroleum, and timber. Antwerp is the strongest arsenal of Belgium and one of the most notable fortresses on the continent. The city is defended by advanced forts and by broad and massive ramparts. The fortifications are maintained with a view to making Antwerp the rendezvous for the army in case the neutrality of the country should be violated. On the east bank of the Scheldt, in the vicinity of the docks, is the Steen, originally part of the Castle of Antwerp and a Spanish dungeon, but now a museum containing relics dating from Roman times to the 18th century. The old Gothic Cathedral, begun in 1352, is the largest and most beautiful church in the Low Countries. Its length is 384 feet and the vaulting is supported by 125 pillars. The churches, museums, and art galleries of Antwerp are filled with paintings by Vandyke, Teniers, Rubens, Jordaens, and many other eminent artists. The city is the seat of the famous Royal Academy of Fine Arts. The wharf frontage of Antwerp exceeds two miles in length; there are great docks at the north and south ends of the town, with a network of connecting railways.

THE BELFRY AT BRUGES

The famous Belfry of the Halles (town hall) of Bruges was built in the 13th and 14th centuries. It is 352 feet in height. A stairway within leads to the top of the tower. The musical chime of bells, the delight of every traveler, dates from 1743.

Liège, the third city of Belgium, is picturesquely situated at the junction of the Meuse and Ourthe rivers. The basis of its prosperity lies in the important coal-mines in the vicinity. The city is widely known for its manufacture of small arms and heavy ordnance, which gives occupation to 40,000 mechanics. The zinc foundries, engine and locomotive shops, and linen-mills also have an important output. Liège has some old buildings, among them the Church of Ste. Croix, the choir of which dates from 1175; the Basilica of St. Barthélemy, built in the 12th century, but modernized in the 18th; and the Church of St. Martin, built in 1542. Liège is the seat of a State university, founded in 1817.

Ghent, the capital and chief city of East Flanders, is situated on a number of islands at the confluence of the Scheldt and Lys rivers. The city has long been famous for its manufactures of cotton and linen goods, lace, and dyed-leather wares. Its linen manufactory employs several thousand operatives. The manufacture of machinery is assuming considerable proportions. Ghent comprises an area of 5,750 acres, part of which, however, is occupied by bleaching-grounds and gardens. The cultivation of ornamental plants is an

important industry. Ghent annually exports large quantities of camelias, azaleas, and other hothouse plants. The Cathedral of St. Bavon, externally a plain, unattractive Gothic church, is noteworthy for its age and for the richness of its interior decorations. The crypt was consecrated in 941; the choir was completed in 1300, and the nave and transept in 1554. The State University at Ghent has a famous library.

Among other larger cities of Belgium are Malines, the seat of the Roman Catholic Primate of Belgium, whose archiepiscopal church, the Cathedral of St. Rombold, was completed in 1312; Bruges, famous like Malines and Brussels for its laces, the commercial center of Europe in the 14th century, now said to have a pauper population of 11,000; Verviers, where upward of 400,000 pieces of woolen cloth are manufactured annually; Louvain, seat of a university which has the largest enrollment in any institution of higher learning in the kingdom; Seraing, site of the famous engineering establishment founded in 1817 by the English manufacturer, John Cockerill, one of the most important machine shops in the world; Ostend, the second seaport of Belgium and one of the great fashionable watering-places of Europe, fully 50,000 visitors frequenting the resort during the season; Tournay, noted for its hosiery; Namur, one of the chief fortified places on the Meuse River, center of the iron and coal district of the south, seat of one of the finest cathedrals in Belgium, built in 1751-67; and Charleroi, situated on the Sambre River, thirty-three miles south of Brussels, founded in 1666 by Charles II. of Spain, center of the Belgian iron industry.

ABBEY OF ST. BAVON, GHENT

This abbey, now in ruins, was founded in 630. It was destroyed by the Northmen, but restored in the 10th century. In 1540 the abbey was razed by Charles I., but part of a 15th century cloister, shown here, is still standing.

Historical. Celts and Teutons composed the aboriginal tribes of what is now Belgium, and the history of their country, from the time of the Roman conquest on, throughout the supremacy of the Franks, of Flanders, of Burgundy, and of Spain, is the history of the Netherlands. But Belgium continued Spanish long after the Seven United Provinces of the Northern Netherlands had won their independence. There was a brief interval at the beginning of the 17th century when the country was independent under the sovereignty of the daughter and son-in-law of King Philip II., but the relapse to Spanish rule came in 1621. In the wars between Spain on the one hand and Holland and France on the other, Belgium lost much of its territory to the last-named power. By the Treaty of Utrecht (1713), following the War of the Spanish Succession, Belgium became the "Austrian Netherlands," only to be lost, almost in its entirety, to France through the War of the Austrian Succession. The provinces were restored to Austria, however, by the Peace of Aix-la-Chapelle (1748).

CHATEAU OF COUNTS OF FLANDERS, GHENT

The fortress of Oudeburg was founded in 868. In the 12th century it was rebuilt and has since been the residence of the Counts of Flanders. The gateway, with its two octagonal towers, was built in 1180.

LA PLACE VERTE AND THE CATHEDRAL, ANTWERP

La Place Verte is a favorite park in Antwerp. It is adorned with a bronze statue of the painter Rubens, erected in 1843. The Cathedral, begun in 1352, was not completed for centuries. It is Gothic in style, and contains several famous paintings by Rubens.

Under the rule of the Empress Maria Theresa Belgium prospered in arts and industries, but her son and successor, Joseph II., seeking to compel the Netherlands to relax the severity with which ancient prerogatives affecting Belgium were enforced, and endeavoring at the same time to curb the power of the Belgian clergy, succeeded only in embroiling the country both at home and abroad. Insurgents left Belgium and organized a military force in the Netherlands. When they returned the citizens of Brussels revolted and joined the revolutionists. The Austrians were driven out and on January 11, 1790, United Belgium became an independent State, but ten months later an Austrian army restored the rule of the empire.

Then followed war with France, and Belgium became an integral part of the republic. The fall of Napoleon entailed a new separation, and in 1815 the Congress of Vienna bestowed Belgium on the King of the Netherlands. This disposition was a fruitful source of discord. The Netherlands was Protestant; Belgium, Catholic. The Belgians distrusted the race that ruled them, and the policy pursued by the Dutch—the endeavor to supplant the French language and the denial of a proportional share in public offices and of equal representation in the States-General—intensified the lack of confidence. The success of the Paris Revolution of 1830 inflamed the citizens of Brussels. They demanded a separate administration for Belgium. By the time the King of the Netherlands saw his way clear to grant the demand it was too late; absolute separation had become inevitable, the Orange-Nassau family was excluded, and in 1831 the Provisional Government elected Leopold of Saxe-Coburg and Gotha King of the Belgians. The Dutch immediately invaded Belgium, but the advance of a French army forced a retreat. The Treaty of London, drafted the same year, recognized Belgium's independence, arranged for the apportionment of the national debt between the Netherlands and the seceding provinces, delimited the frontier, and guaranteed

CHURCH AND FORTRESS, DINANT

Dinant, on the Meuse, is built about the base of a barren limestone cliff, crowned by a fortress. When Philip of Burgundy took Dinant in 1466, he had 800 of the inhabitants tied in pairs, back to back, and thrown into the river. The interior of its Gothic church (13th century) has recently been restored.

the neutrality of King Leopold's domain. Great Britain, France, and Belgium ratified the convention at once and Russia, Prussia, and Austria the following year; but not until 1839 did the Netherlands acquiesce in the terms of the treaty.

For years Belgium has relied on this guaranty of neutrality and inviolability, but more recently the training of a national army has been undertaken, a system of conscription introduced, and plans developed for the strengthening of the fortifications. Military schools, general and special, are maintained.

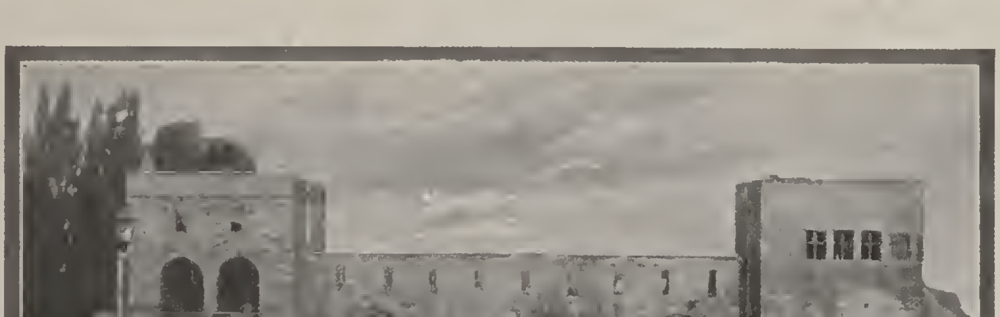
Government and Education. By the constitution of 1831, Belgium was made a "constitutional, representative, and hereditary monarchy," with succession in the order of male primogeniture. Legislative power rests with the King, the Senate, and the Chamber of Representatives. Senators, of whom there are 102, serve for eight years. Twenty-six are elected by the provincial council, the remainder by direct popular vote. The Chamber of Representatives consists of 172 deputies, all of whom are elected directly for a term of four years. Universal male suffrage prevails, and under the cumulative system of voting, taxpaying fathers of families have an additional vote; so also do citizens over twenty-five years of age who are in receipt of annual incomes of not less than 100 francs ($19.30) or who own immovable property valued at 2,000 francs ($386). Two supplementary votes are accorded citizens who have received the higher education. In the elections for communal officers, four votes are the most accorded an elector. Failure to vote is punishable as a misdemeanor.

As early as 1842 a statute was enacted requiring each commune to maintain at least one primary school. Under the acts now in force, the entire cost of primary education is laid upon the commune, while the State and the provinces add subsidies. Attached to the four universities, situated at Ghent, Liège, Brussels, and Louvain, are special schools of engineering, arts, manufactures, and mining. Fully one-fourth of the population, however, are illiterates.

Although Belgium is strongly Roman Catholic, there is no State religion and religious liberty is guaranteed by the constitution. Grants from the national treasury toward the income of the clergy are made alike to Roman Catholics, Protestants, and Jews, in proportion to numbers. Religion enters largely into Belgian politics, power having oscillated between the Catholic and Liberal parties for fifty years, though since 1899, a third party, the Socialists, has held the balance of power. The duality of race represented in the Belgian population — the Flemings, speaking a number of local dialects of the literary Flemish, and the Walloons, speaking French—has given Belgian statesmen a language problem akin to that which exists in Austria.

HOTEL DE VILLE, OUDENARDE

Oudenarde, an old fortified town, is chiefly famous for the battle of July 11, 1708, when the allied armies under Marlborough defeated the French. The finest building is the Hotel de Ville (town hall), erected in 1525-29, in the late-Gothic style.



BRIDGE OF TROUS, ACROSS THE SCHELDT AT TOURNAI

THE NETHERLANDS

THE KINGDOM OF THE NETHERLANDS or Holland, with Northern Belgium and Northern France, forms a part of the plain that stretches southwestward from the Ural Mountains across the Continent of Europe. Since this plain reaches its greatest depression in Holland and Belgium, those countries have been known for centuries as the "Low Countries." The Netherlands lies between 50° 45′ and 53° 32′ N. lat. and 3° 25′ and 7° 12′ E. long., and has an area of 12,648 square miles. The greatest elevation, 1,055 feet, is in Limburg. Roughly speaking, the territory west of the meridian of 5° E., which passes near Amsterdam, lies below the level of the sea; while that east of the meridian, except a small strip along the Zuider Zee, lies above sea-level. Amsterdam is sixteen feet below high-water mark.

Geological Formations. Geologically the Netherlands is of the most recent Quaternary formation, alluvial and diluvial, the older formations, Tertiary and Secondary, being represented in only one-tenth of 1 per cent of the surface. The delta formation of the Rhine, Meuse (Maas), and Scheldt rivers, and indeed the whole coast-line of the Low Countries, may be traced within historical times. It is a history of conflict between ocean and river currents, the land gaining on the sea wherever the alluvial deposits were of sufficient volume and coherence to resist dispersion. By the erection of embankments and the draining of submerged districts, man became the able ally of the rivers.

QUEEN WILHELMINA

Wilhelmina Helena became Queen of the Netherlands at the age of ten, in November, 1890. Her mother acted as Regent until the Queen's eighteenth birthday, August 31, 1898. Queen Wilhelmina was married in 1901 to Prince Henry of Mecklenburg-Schwerin.

Rivers and Coast-lines. The Rhine River on its way to the North Sea has cut three main channels through the lowlands. The northernmost branch, called the Ijssel River, flows into the Zuider Zee not far from the mouth of the Vecht River. The most southerly branch, known as the Waal River, unites with the Meuse River, which empties into the North Sea. North of the Waal flows the third branch of the Rhine, the Lower Rhine or Lek River, which joins the Meuse and the Waal at the seaboard. The Meuse River follows a curiously winding channel from the Vosges Mountains to the sea. The Scheldt River, although properly a river of Belgium, has the whole of its delta within the confines of Holland, emptying into the sea near Antwerp.

The Zuider Zee, the most marked indentation of the Netherlands coast, dates from the 13th century. A severe inundation occurred as early as 1219, and in 1282 was recorded one still more terrible, when the sea burst a strip of land that barred it from a series of lakes in the interior, overwhelmed seventy-two towns, and destroyed 100,000 lives. The deluge left merely a chain of low islands to mark the former coast-line. To other inundations of the same period, one in 1277 and another ten years later, is supposed to be due the formation of the Dollart, between the Netherlands and Germany. All of the most fertile portion of the Netherlands at some time has been submerged and would still be were it not for dunes and dikes.

THE ROYAL PALACE, AMSTERDAM

The Royal Palace, Amsterdam, was built in the 17th century for a town hall (Stadthuis) at a cost of 8,000,000 florins. After Louis Bonaparte was made King of Holland in 1806, the need of a palace was thriftily met by adapting the town hall for this purpose.

Dikes and Canals. When the Romans, 400 years before the Christian era, undertook the conquest of the Netherlands they found the inhabitants already struggling to resist the encroachments of the sea. Then, however, the war was defensive; man was seeking only undisturbed possession of the soil. The systematic construction of dikes began in the 14th century. The entire country is now divided and subdivided by a network of water courses, and the State maintains over 1,000 miles of sea dikes. "God made the sea; we made the shore," has passed into a proverb in Holland.

Once fairly well protected against further encroachment by the sea, the minds of the Hollanders turned naturally to the reclaiming of the land they had lost. A few lakes were drained in the 15th and 16th centuries, but it was not until the beginning of the 17th century that the work was begun in earnest. In the first half of that century sixteen lakes were permanently drained, adding to the national territory nearly 60,000 acres. One of the finest of these achievements was the draining of Beemster Polder in East Holland. "Polder" is the name given in the Dutch language to any section of land artificially drained. The pumping was done by windmills, the area to be reclaimed first having been inclosed by a strong dike. After the greater part of the water had been drawn off, intersecting canals were dug in the oozy lake-bottom. By being carefully graded these rendered possible the drainage of all superfluous moisture. Inasmuch as the canals can be used for purposes of irrigation in a dry season, the reclaimed land is of wonderful fertility. The same system of canal construction and drainage has been followed since the invention of the steam-engine made the work of pumping less arduous. The latest great achievements were the draining of Haarlem Lake in 1840–52 and the reclamation of the Ij Polder, completed in 1876. In the reclamation of the Ij, once an inlet of the Zuider Zee, 14,000 acres of fertile land were exposed, and at the same time a ship-canal connecting Amsterdam with the North Sea was opened. The work of 300 years has reclaimed in all 210,000 acres of land. The draining of the Zuider Zee, which is projected, would reclaim 500,000 additional acres. In 1901, however, the States-General indefinitely postponed this undertaking.

With the rise of Holland in commercial importance, the natural waterways were found insufficient for trade communication between the cities, and not only were the drainage canals more and more utilized as highways, but other channels were cut expressly for that purpose. The latter include the North Holland Canal (forty-two miles in length), constructed in 1819–25, between Amsterdam and Helder; the North Sea Canal (fifteen miles in length), already mentioned, connecting Amsterdam with the North Sea; and the Willems Canal, joining the branches of the Meuse River in North Brabant. Other important channels are the Rotterdam

Canal, the canal of South Beveland connecting with the Scheldt River, the Merwede Canal, and the intricate canal system that connects all parts of West Friesland, Groningen, and Drenthe with the Zuider Zee and the Dollart. The sea canals are protected at their outlets by massive flood-gates, which may be closed when the sea-level is higher than the water in the canals, and provision has been made for flooding the country by these same means in time of war. The total length of the navigable waterways of Holland, exclusive of canals, is about 3,000 miles; of canals, about 1,907 miles. Many of the most serviceable highways of Holland are built along the broad tops of the dikes.

Climate and Flora. The proximity of the sea insures an equable temperature throughout the year. Nearly fifty years' observations at Utrecht give an annual mean temperature of 49° for the spring and autumn months, 66° for the summer, and 34.5° for the winter. The average annual rainfall is twenty-eight inches. Rain falls on about 204 days in the year; snow, on nineteen days. The natural products of the Netherlands are almost wholly the result of cultivation. The flora and fauna, therefore, have been so modified by man, that they show little that is individual or characteristic. Dutch flowers are famed the world over, but they are flowers grown in gardens, not those that are native to the soil.

Industries and Commerce. A favorable climate, a fertile soil and the topography of the country combined with the natural bent of mind of the Dutch to make them an agricultural people; the shrewd development of their resources made them a nation of traders; commercial pursuits led them into colonial enterprises, and their colonies have enlarged their trade. The fluvial and marine clays are well adapted to the growing of hops, rape-seed, sugar-beets, wheat, and tobacco; the sandy soils produce chiefly rye, buckwheat, and potatoes. Fruit-raising, truck-farming, and flower-gardening are confined mainly to the higher land along the edges of the marshes and to the reclaimed lands of the west. The fisheries of the coastal waters and the rivers are important.

STADTHUIS TOWER, MONNIKENDAM

Monnikendam is a suburb of Amsterdam. The tower of the Stadthuis (town hall) was built in 1591-3.

SINGEL GRACHT (CANAL), AMSTERDAM

The many canals that divide the city of Amsterdam into over ninety islands are locally known as "Grachten." The Singel Gracht once surrounded the entire city; whence its name from singel, meaning girdle.

Among manufactures, the textile industries are most largely followed. Other important industries are metal-working for ship-building and the making of agricultural implements, the manufacture of paper, leather, chemical products, spirits, beer, vinegar, and sugar, and the preparation of food materials, such as oleomargarine, butter, and cheese. In the province of Limburg are a few coal-mines, the greater number of which belong to the State.

The trade of Holland is chiefly with Germany, Russia, Belgium, Great Britain, and the Dutch colonies. Free trade prevails; the few duties levied are for purposes of revenue only. Foremost among exports are cereals, flour, iron and steel, textiles, copper, sugar, oleomargarine, vegetables, paper, wood, and skins. Among imports are cereals, flour, iron and steel, textiles, coal, mineral oil, rice, coffee, and seeds. As in most European countries, import values largely exceed those of exports. The bulk of the commerce is carried in foreign vessels.

Historical. Scanty remains of Druid altars and cairns indicate that Celts originally possessed what are now Holland and Belgium. The portion of Holland lying south of the Rhine River was occupied, when Cæsar entered Gaul, by the Celtic Belgæ. The valleys of the Rhine and Meuse rivers were the territory of the warlike Batavi; while the coast, from the mouth of the Rhine to the mouth of the Ems River, was occupied by the "free Friesians," who, with the Batavians, offered spirited resistance to Roman conquest and, even after they were subdued, retained a greater degree of independence than remained to most of the races subject to the empire.

Late in the 3d century appeared the Franks, who were followed by the Saxons. The latter pushed their way in between the Friesians on the north and the Franks on the south and, in alliance with the Friesians, opposed for four centuries the enlargement and consolidation of Frankish rule in the Netherlands. The struggle ended only when Charlemagne, King of the Franks, was crowned Emperor of the Romans.

Dukes, counts, and bishops, held actual rule over the Netherlands, which nominally owed supreme allegiance to Charlemagne. From the middle of the 9th to the middle of the 10th century the Netherlands alternated between French and German rule or was divided between the two, and the Northmen seized the opportunity to invade and ravage the country. This invasion strengthened the authority of the nobles, under whose protection in the fortified towns the inhabitants of the country-side were glad to take refuge. By the end of the 13th century Holland had become independent of the imperial authority and the Counts of Holland were disputing with the powerful Counts of Flanders the possession of the islands situated at the mouth of the Scheldt River. The 14th century, however, witnessed the extinction of both rival houses and the establishment of the Dukes of Burgundy as lords of the Netherlands.

Through the marriage of Mary of Burgundy to Maximilian, son of Frederick III. of Hapsburg, the government of the Netherlands passed to the Imperial House of Austria. His grandson, Charles V. of Spain, consolidated under his authority seventeen provinces of the Netherlands. One of his acts which aroused the keenest resentment was the forcing on the burghers in 1540 of a foreigner, René of Chalons, as stadtholder of Holland, Zeeland, and Utrecht. Yet it was the cousin of this Prince of Orange, William, who became the real founder of the Republic of the United Provinces and led in the struggle for civil and religious liberty which was waged against Spain almost continuously from the time the Regent, the Duke of Alva, established the Inquisition and a reign of terror in the Netherlands until 1648, when Spain acknowledged the independence of the United Provinces.

A sharp contest for the supremacy of the seas next engaged Holland. England endeavored to destroy the carrying-trade of the provinces. Three times war broke out, and on the last occasion the French invaded Holland. The war with France continued until the Peace of Nimwegen in 1678 established the independence of the Dutch and at the same time practically marked the extinction of the republic. Ten years later the stadtholder, William, wedded to the daughter of the Duke of York, was proclaimed King of England. He retained his authority in the United Provinces until 1702.

Toward the middle of the 18th century French influence in the Netherlands became dominant. In 1806 the Emperor Napoleon made his brother, Louis Bonaparte, King of Holland. In 1810 he annexed the kingdom to his empire. In 1813, aided by the Russians and Prussians, the Dutch expelled the French. In 1815 by the Congress of Vienna the present kingdom was established, with William, Prince of Orange, son of William V., as first King. This ruler was the great-grandfather of Queen Wilhelmina, who succeeded to the throne in 1890.

Of Holland's colonial possessions there remain at the present day (1903) only Java, Sumatra, some smaller islands in the Eastern Archipelago, and portions of New Guinea and Borneo, all comprised in the Dutch East Indies. In the Western Hemisphere are Surinam or Dutch Guiana and the colony of Curaçao. The dependencies have a total area of about 736,000 square miles.

THE CITY OF HAARLEM

Haarlem is on the river Spaarne, five miles from the German Ocean. Canals bring the ship traffic into the very heart of the city and turn the streets into quays. It is a typical Dutch town, with clean, quiet streets and shady promenades, trim gardens, and old-fashioned houses of brick and hewn stone.

Government and Education. The government of the Netherlands is that of a hereditary constitutional monarchy. The two chambers of the Dutch Parliament retain their old title, the States-General. The upper chamber has fifty members, elected by the local legislatures or States of the several provinces. The lower chamber is composed of 100 deputies, who are elected directly. The members of the upper chamber are chosen for nine years, one-third being renewed every three years; those of the lower chamber are elected for four years and retire in a body. The government is regulated by the constitution of 1815, which was revised in 1848 and 1887.

In 1900 education was made compulsory between the ages of six and thirteen years. Public primary instruction is supported by the State and the communes jointly. There are four public universities (Leyden, Utrecht, Groningen, and Amsterdam) and one private university.

The peace strength of the army is about 27,600 officers and men. On a war footing the army consists of about 68,000 men. Recruiting is mainly by conscription.

Chief Cities of Holland. The kingdom, with a total of 5,104,000 inhabitants, contains twenty-one towns having a population in excess of 20,000 and eight towns of which the population is more than 50,000. The density of population reaches its minimum, less than sixty-five to the square mile, throughout the sandy tracts and unreclaimed marshes in North Brabant and the gravelly uplands of Groningen. On richer soils the density varies between sixty-five and 250 to the square mile, while in the vicinity of the large towns of North and South Holland it is from 500 to 1,000. The royal family and a majority of the inhabitants belong to the Dutch Reformed Church.

CHURCH OF ST. BAVON, HAARLEM

Haarlem was a flourishing town as far back as the 12th century, and has many fine old buildings. St. Bavon's Church, erected in the 15th century, is the largest church in Holland. The great organ, constructed in 1730, has sixty stops and 5,000 pipes.

Amsterdam, the commercial metropolis and nominal capital, is the chief money-market of Holland, the headquarters of the large shipping companies, and a manufacturing center of importance. The canals that intersect the city divide it into ninety islands, many of them flanked with beautiful avenues of elms, along which are situated the most characteristic of the old Dutch buildings for which the city is noted. The main business section is the Dam, a large square around which are the Exchange, the New Church, and the Royal Palace. The New Church shows various styles of architecture covering the period from 1408 to 1470. The Royal Palace was begun in 1648. The museums of Amsterdam are rich in treasures of the arts and sciences. The commercial influence of the city has been greatly enlarged since 1813, and it is now one of the chief seaports of Europe.

Rotterdam, the seaport through which enters nearly two-thirds of the foreign trade, lies at the mouth of the Meuse River, about fifteen miles from the North Sea. Old Rotterdam is on the right bank of the river. In the Great Market is a bronze statue of Erasmus, the reformer, whose birthplace is near by. All along the river front extends the Boompjes, a handsome quay. On the left bank of the river is the modern portion of the city.

The Hague, in Dutch 's Gravenhage ("the count's inclosure" or "hedge"), the royal capital and seat of government, is the third city of Holland in point of size. No other city in the kingdom has so many broad and handsome streets, spacious and imposing squares, and lofty and substantial buildings. The town is an art center rather than a commercial city.

Utrecht is one of the most important religious and educational centers of the kingdom. The city contains the Royal Mint and a university of high reputation, the latter founded in 1636. The great Gothic Cathedral consists of a choir and transept dating from the 13th century. Owing to the destruction of the nave by a hurricane in 1674 the west tower, 338 feet high, now stands some distance from the existing church.

Haarlem, on the Spaarne River, has several thriving manufactories and is known as one of the cleanest and most attractive towns in Holland. In the 17th century the flower trade reached its height, and is still flourishing.

Leyden, one of the ancient towns of Holland, is penetrated by several canal-like arms of the Old Rhine River. At the height of its prosperity, as the center of the Dutch textile industry, the city had fully double its present population. The University of Leyden

was founded in 1575 by Prince William of Orange. Leiden was for about twelve years the exile home of the Pilgrim founders of the Plymouth Colony in Massachusetts.

Groningen, one of the chief towns in the northeast, is situated on the Hunse, which has been converted into a canal, rendering the port accessible for large sea-going vessels. The town is a market for agricultural products and an important shipping center; its market place is the most spacious in the Netherlands. Broad boulevards and fertile gardens now occupy the ground once covered by its ancient fortifications. There is a university founded in 1614; the city is of especial interest to students of architecture because of its private dwellings, many of which date from the 17th century.

Arnhem, a fortified town and river port on the Rhine, and Nijmegen, finely situated on the Waal, are flourishing market towns that attract many inhabitants by reason of their large river trade and the beauty and picturesqueness of their surroundings.

Maastricht and Tilburg are important manufacturing centers in the fertile districts of the south. Although the ancient fortifications of Maastricht have been demolished, it still remains a place of military importance; the Church of St. Servatius (560–599), the oldest church in the Netherlands, and the old St. Petersburg sandstone quarries nearby (worked possibly since Roman times until a few years ago) are the chief attractions for tourists.

GREAT BRIDGE AT ROTTERDAM

Rotterdam is built on both sides of the Meuse River, about fifteen miles from the North Sea. The great railway viaduct and bridge, pictured above, which crosses the river from the upper end of the Boompjes, was completed in 1877.

LUXEMBURG

The Grand Duchy of Luxemburg, a neutral State of Europe, on the northeast and east is contiguous to Prussia, on the southwest and south, respectively, to France and the former French province of Lorraine, and on the west to Belgium. Its area is 998 square miles.

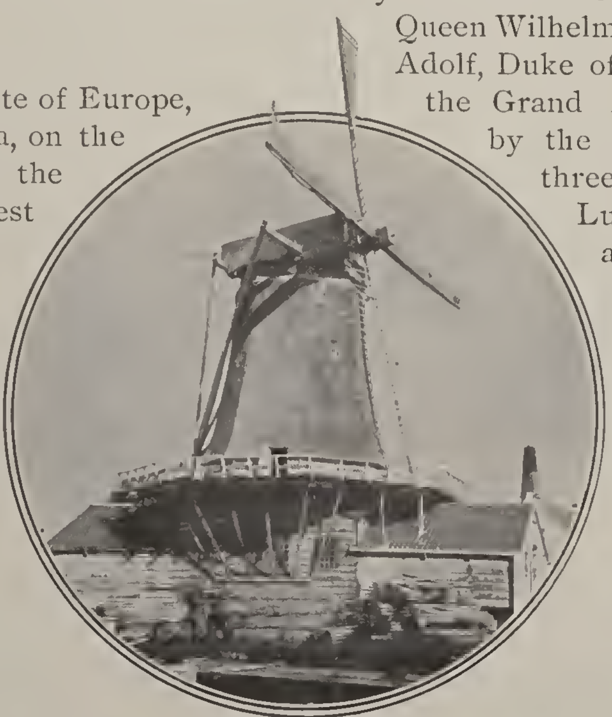
Physically the Grand Duchy consists of a plateau of moderate elevation lying mainly in the basin of the Moselle River. The surface is diversified by numerous deep-cut and narrow valleys. On the east the Moselle River and the Sauer River, with its affluent, the Our River, form the boundary, while the interior is traversed from north to south by the Alzette River. The soil of the Grand Duchy usually is fertile, particularly in the south, and agricultural pursuits engage the greater part of the population. The vintage is large. The southern sections are well wooded and contain rich deposits of iron. Lead, antimony, and other ores are found, while alabaster and excellent slates are quarried. The manufacture of gloves is also an important industry.

"HOUSE IN THE WOOD," THE HAGUE

About a mile from the city of The Hague is the Huis ten Bosch (House in the Wood), a royal villa built in 1647. It has become notable in modern times as the place where the International Peace Conference met in May, 1899.

The territory now embraced in the Grand Duchy of Luxemburg formed a part of the Holy Roman Empire and was a countship in the Middle Ages. After a series of vicissitudes it passed with the Netherlands to the House of Hapsburg and to Spain. Part of its territory was ceded to France in 1659. Austria acquired it by cession in 1713 and it was absorbed into the Napoleonic Empire in 1795. By the Congress of Vienna in 1815 Luxemburg was made a Grand Duchy, and was attached to the Crown of the Netherlands as a member of the Germanic Confederation. In 1866 the great fortifications of its capital city, Luxemburg, and its strategic value made it an object of contention between France and the newly formed German empire, and in 1867 Holland, Belgium, and the great powers agreed that the fortifications should be destroyed, the neutrality of the Grand Duchy guaranteed, and its crown made hereditary in the male line of the Nassau family. On the accession of Queen Wilhelmina (1890) accordingly the Grand Duchy passed to Adolf, Duke of Nassau. There is a Chamber of Deputies in the Grand Duchy of forty-five members, elected directly by the cantons for six years, one-half retiring every three years.

Luxemburg, the capital, is built on a site remarkable for its natural beauty. The ground once occupied by its extensive fortifications has been converted in part into a handsome public park.



GERMANY

THE EMPIRE OF GERMANY, which occupies almost the geographical center of Europe, is a composite State comprising four kingdoms, six grand duchies, five duchies, seven principalities, three free cities, and the annexed Imperial Land of Alsace-Lorraine (Reichsland Elsass-Lothringen). It lies between 47° 16′ and 55° 54′ N. lat. and 5° 52′ and 22° 53′ E. long. and has an area of 208,830 square miles.

In outline the empire is very irregular. The North Sea, Denmark, and the Baltic Sea bound it on the north, Russia and Austria-Hungary on the east, Austria-Hungary and Switzerland on the south, and France, Belgium, and the Netherlands on the west. Its land boundaries are largely artificial, though the Vosges Mountains mark a part of the frontier of France, and mountains separate German territory from Austrian on the south.

Germany is the only State of Central Europe within the borders of which are found sections representative of each of the several zones of configuration into which the surface of the mid-Continent is divided. The Netherlands has its lowlands but practically no highlands, and Switzerland its Alpine slopes and mountain-chains but no lowlands; whereas Germany occupies not only a vast expanse of the great northern plain of Europe, but also above that lowland area, rising in terraces to the Alps, a central mountain region and a great plateau.

EMPEROR WILHELM II.

Wilhelm II., Emperor of Germany and King of Prussia, succeeded to the imperial throne June 15, 1888, on the death of his father, Emperor Friedrich III. He was then 29 years of age. His wife, Empress Auguste Victoria, was a princess of the house of Schleswig-Holstein.

Mountain Regions. The northern plain in Germany comprises the whole of Northern Prussia. South of it lies the central mountain region, the northern limit of which traverses Rhenish Prussia just below Cologne, making a sweep first to the northeast, then to the northwest along the Teutoburger-Wald, and finally trending southeastward, includes the Harz Mountain region and separates low-lying Northeastern Prussia from the highlands of Saxony and Silesia. The southern limit of this region is the Danube River; the western, the Rhine River; and the eastern, the Carpathian Mountains.

Within a third zone, the glacis or slope or foreland of the Alps known as the Swabian-Bavarian Plateau, is comprised all of Bavaria and Würtemberg lying south of the Danube River. This region finally leads up to a fourth zone, comprising the limestone Alps of Southern Bavaria.

It is only in the Bavarian Alps that Germany attains an elevation above the snow-line, the highest point in the empire being the Zugspitze, 9,710 feet above sea-level. The Bavarian Alpine peaks are approached in height, in Germany or on its frontiers, only by the Riesengebirge, or Giant Mountains, which rise in the Schneekoppe to an altitude of 5,260 feet. Of the Harz Mountains, the highest peak is Brocken (3,745 feet); of the Fichtelgebirge in Bavaria, the Schneeberg (3,455 feet).

The Bavarian Plateau, which intervenes between the German Alps and the central highlands, with an average elevation of 1,600 feet, is the highest, with the exception of the Iberian Plateau, in Europe. Its lowest levels are marked by the bed of the Lake of Constance in the southwest and by the Danube River in the northwest and northeast. On the shores of the lake, 1,380 feet above sea-level, Germany, Austria, and Switzerland have ports. Through the lake flows the great river of Germany, the Rhine, in its course from an Alpine source to the ocean.

Geological Formations. The most ancient rocks of Germany are the gneisses, schists, and granites that underlie the Bavarian plateau and the central highlands. The high tableland stretching westward through Prussia is composed of rocks of the Devonian formation. The Carboniferous, rich in both coal and iron ore, exists in Westphalia, Rhenish Prussia, and Silesia. Along the border of Bavaria the Jurassic rocks can be traced, and those of the Cretaceous in North Germany. By the end of the Tertiary period all the land now comprised in Germany had risen from the sea, and it was left for the mighty glaciers of the ice age to heap on the northern plain (which was the last to emerge) the great masses of drift that form its surface. Throughout the mountainous districts, volcanic rocks of different ages greatly diversify the geology of the country.

THE REICHSTAG BUILDING, BERLIN

The Reichstag Building, an imposing structure of Silesian sandstone, facing the Königs-Platz (King's Place), a large open square in Berlin, was built in 1884-94. In this building the two Houses of the German Imperial Parliament—the Bundesrath or Federal Council, and the Reichstag, or Diet of the Realm—meet in annual session at the call of the Emperor.

The Coastlines. The peninsula of Jutland, separating the North Sea from the Baltic Sea, marks the dividing line between two coastlines of radically different characteristics. The tempestuous North Sea is a

constant menace to the rich alluvial coastland of the northwest, which partakes of the nature of the Dutch seaboard, and like it is protected by diking. The Baltic Sea, on the other hand, is not subject to storms and is less affected by tides, while its coast is higher,

WARTBURG CASTLE
This fine old castle, near Eisenach in Saxe-Weimar, founded in 1067, was the residence of the Landgraves of Thuringia until 1247. In this castle Martin Luther was concealed after the Diet of Worms for nearly ten months, and there finished his translation of the Bible. Emperor William is said to spend several days there each year, in religious meditation.

attaining an elevation of 520 feet above sea-level. The Baltic Sea, moreover, is shallow for a considerable distance from the shore. To these circumstances is due the fact that, instead of being worn away, the coast is encroaching on the sea. After every storm the sand washed up by the water mixes with the mud carried down by the rivers to form sand-bars. These alluvial bars, called "Nehrungen," inclose great fresh-water lagoons known as "Haffs." At other points along the coast the sea has cast up great walls of sand, capped by successive banks of pebbles, the whole forming dams arranged with remarkable regularity. All along the coast sand-dunes of varying height are found, which have been piled up close to the water's edge by the sea, and farther inland, by the wind. Hardy grasses form the nucleus of the dune; the roots and blades consolidate the mass and afford lodgment for further accretions. Lying close to the coast are small islands formed largely in the same manner as the Nehrungen. The East Frisian and North Frisian islands, sixteen in number, belong to the North Sea group; Rügen is the largest of the German islands in the Baltic Sea. The aggregate area of the alluvial coast islands is only about 1,001 square miles. The only rocky island in the North Sea belonging to Germany, the sandstone islet of Helgoland, off the mouth of the Elbe River, was held by the British from 1807 to 1890, being then transferred by treaty. It is a popular watering-place, is strongly fortified, and has submarine cable communication with the mainland.

A marked difference between the configuration of the eastern and western sections of the northern plain is observable in the interior as well as along the coast. Inland from the fertile seaboard in the west lies a sandy waste of rising land known as the Geest, the approach to which is over peatmoors and marshes. In the east, on the contrary, the low plateaus are dotted with almost countless numbers of small lakes and the sandstone hills are overgrown with pine forests.

Lakes and Rivers. Although the province of East Prussia is known as the Lake Region of Germany, the largest bodies of fresh water are in the mountainous districts of Southern Bavaria. The Chiem-see, Ammer-see, and Würm-see are the most important; the area of none exceeds seventy-five square miles.

The drainage system of Germany is sharply subdivided by the Swabian and Franconian Jura mountains and the Bohemian Forest. The drainage of the Bavarian Plain, south of these mountains, is carried across Austria, Hungary, and the northern part of the Balkan Peninsula to the Black Sea by the Danube River and its southern affluents, the Iller, Lech, Glan, Isar, and Inn rivers. Of these tributaries the Inn alone is navigable, and only as far south as Hall, near Innsbruck. Its affluent, the Salzach River, is also navigable. The Iller, Lech, and Isar rivers are used to float timber down from the Alps. Of the northern tributaries, the Altmühl River is navigable for boats and the Regen River for rafts. The Naab, one of the four rivers that have their sources in the Fichtelgebirge and flow to the north, east, south, and west, respectively, can be traversed by boats for only fifteen miles of its northern course. The Danube River is navigable from Ulm in Würtemberg to its mouth. The drainage of the remainder of Germany flows to the North and Baltie seas. The Rhine River, although its source is in Switzerland and its mouth on the coast of the Netherlands, is properly called a German river, for the greater part of its length of 810 miles is in Western Germany. Leaving the Lake of Constance by way of the depression that divides the Swiss from the German Jura Range, the Rhine separates the Swiss glacis of the Alps from the Bavarian; it drains the Black Forest, the Odenwald, the Taunus Range and the Westerwald on the east, and on the west, the Vosges, Hunsrück, and Eifel ranges. Leaving the central highlands it flows through the northern plain and thence passes out of Germany into the Netherlands. It is navigable for large vessels as far south as Strassburg. Above that point rapids and the falls of Schaffhausen and Zurzach obstruct traffic, so that vessels use the Rhine & Rhone Canal. The important tributaries of the Rhine are the Ill, Neckar, Main, Moselle, Lahn, Ruhr, and Lippe rivers. The Ill River (125 miles long) flows northward through Alsace-Lorraine to its junction with the main stream; it is navigable from Kolmar (Colmar). The Neckar River skirts the eastern margin of the Black Forest and, trending to the west, south of the Odenwald, reaches the Rhine River at Mannheim; it is about 222 miles long and is navigable for large craft to Heilbronn. The Main River, which contributes one-third of the Rhine's volume of water, rises in the Fichtelgebirge and pursues a zigzag course across Franconia, draining the slopes of the Odenwald and the Spessart Mountains. It is about 300 miles long and navigable to Bamberg, from which point the Ludwig's Canal carries shipping to the Altmühl and Danube rivers, thus bringing the North and Black seas

BRIDGE IN DRESDEN, SAXONY
The beautiful city of Dresden, the Saxon Capital, is on both sides of the River Elbe. Built in the early part of the 13th century, it has been since the 15th century the residence of the Saxon Kings. The picture shows the "Old Bridge," one of the four stone bridges across the Elbe connecting the parts of the city. The large building at the end of the bridge is the Royal Palace, in the older section of the city.

into direct communication. The Moselle River on the west drains the slopes of the Hunsrück and Eifel ranges; the Lahn River on the east, those of the Taunus Range and the Westerwald. The Moselle is navigable for 214 miles, but its course, like that of the Main, is too tortuous to be specially advantageous for traffic.

Flowing in northerly courses to the North and Baltic seas are the remaining rivers of the German drainage system, including the Ems, Weser, Elbe, Oder, and Vistula (Weichsel). The Ems, like the other rivers, flows close to its western watershed. The Werra and Fulda rivers, the junction of which forms the Weser River, drain the slopes of the Thuringian Forest and the Vogelsgebirge, while the Weser receives the last of the seepage from the northern highlands and flows across the northern plain, discharging its volume into the North Sea.

The Elbe River is second only to the Rhine in its importance to Germany. It rises in the southern slopes of the Riesengebirge, and its many affluents, among them the Moldau and Eger rivers, drain the whole of terraced Bohemia.

Flowing next through a mountain pass, the river descends to the northern plain, its volume swollen during its course across Prussia by the Havel and Saale rivers, and many small streams. The length of the Elbe is 720 miles; it is navigable for ocean vessels to Hamburg and for other craft throughout more than 500 miles of its course. The Oder River is also an international waterway. With its principal affluent, the Warthe River (400 miles long), the Oder is navigable into Poland, while vessels of 400 tons can ascend to Upper Silesia. The river properly ends in Stettiner-Haff, from which point its waters empty by three channels into the Baltic Sea. The Oder is 552 miles long; with its tributaries it drains Brandenburg and Posen. The Vistula River, from the Russian frontier to its mouth in the Bay of Danzig, is navigable for boats of considerable size. It flows through the marshy region of the eastern plain and reaches the Baltic Sea by way of a delta.

Climate, Flora, and Fauna. Germany as a whole is remarkable for the uniformity of its climate, despite great extent in longitude and latitude and considerable variations in altitude. The climate grows colder from southwest to northeast, the rigor of the winters in Western Germany being modified by the moist, warm winds from the Atlantic Ocean, which are intercepted by no mountain barrier. In the Rhine Valley, sheltered toward the south by the Vosges Mountains and the Black Forest, and in the Main River Valley the climate is mild enough to bring the almond and chestnut to maturity; the mean annual temperature is between 48° and 51°. At Bayreuth, on the Bavarian Plateau, the mean annual temperature is 45.5°; while at Königsberg, on an arm of the Baltic Sea, nearly 500 miles farther north, it is 44°.

NEW PALACE, POTSDAM—IN CHARLOTTENHOF VILLA

The ancient town of Potsdam, Brandenburg, owes its splendor to Frederick the Great, who built two palaces there and laid out the grounds of Sans Souci Park. At the west end of the Park is the New Palace, 375 feet long, completed in 1769, and now the imperial summer residence. Two rooms in Charlottenhof villa, in Sans Souci Park, once occupied by the great traveler, Alexander von Humboldt, are still kept as when he used them.

The mountains receive the heaviest rainfall, the precipitation there being greatest in summer. On the summit of the Brocken in the Harz Mountains the rainfall amounts to about sixty-six inches in a year. The average annual rainfall for Germany is twenty-eight inches. On the coasts the heaviest rainfall is in the autumn.

The flora of Germany does not contain any species peculiar to the country. The plains are continuous with those lying to the east and west, the mountains with those that lie to the south, making an interchange of species inevitable. Of the entire area about one-fourth is covered with forests, chiefly on the mountains. In the south larch trees abound, chiefly in the ranges of the Alps, where is also found the beautiful Rolle pine. In the Vosges Mountains, the Black Forest, the Thuringian Forest, and on the slopes of the Sudetic Mountains are vast growths of silver fir. Deciduous trees, mainly oak and beech, compose fully one-third of the German forests; the Scotch pine, one-half. The latter, together with the white birch, is the characteristic growth in the northern plain. The most thinly wooded portion of Germany is the northwest, where the salt winds from the North Sea check all vegetation except heath and shrubs. Of the indigenous fauna few species are peculiar to Germany. The larger wild animals, including the bear, bison, and wolf, have been exterminated. The forests contain the stag, roe, and wild boar, and in certain sections the elk.

Resources and Industries. Notwithstanding the fact that the soil of Germany on the average is not exceptionally fertile, agriculture engages more than one-third of the population. According to official returns 91 per cent of the soil is classed as productive and 9 per cent as unproductive. Rye usually leads in acreage, and hay, oats, potatoes, wheat, and summer barley are also raised. Among other farm products are hemp, flax, madder, saffron, tobacco, hops, and a variety of fruits and vegetables. The production of grains and vegetables, however, is inadequate for the food-supply of the people, and foodstuffs are largely imported. In the Rhine highlands are produced the best German wines. The Baltic and North Sea fisheries of Germany are unimportant.

In view of the fact that the area still covered by forests amounts to more than 25 per cent of the total for Germany, the husbanding

of this vast resource constitutes an important industry. It is conducted under governmental supervision and is the source of large revenue.

GODESBERG CASTLE

Near the city of Bonn, on a hill 400 feet above sea-level, is the ruined castle of Godesberg. It was built by the Bishops of Cologne in the 13th century, and destroyed by the Bavarians in 1583.

Superior horses are bred on the plains of the Bavarian Plateau and in the northern district. In the number of horses annually sent to market, as also in the number of cattle raised, Germany is second only to Russia. In Holstein fine herds intended largely for export graze on the rich pasture areas reclaimed from the marshlands of the peninsula, while Friesian cattle feed on the meadows lying inland from the protecting sea-walls on the northwestern coast. Other domestic animals include sheep, swine, and goats.

As to minerals, Germany surpasses every other continental country in the production of iron and coal, and is rich in salt and zinc mines. Gold, silver, lead, and copper ores are also found.

The central position of Germany, the richness of the deposits of coal, the technical aptness of the inhabitants, the length of the navigable waterways, and the degree to which the Government has fostered industry, have combined to make the nation one of manufacturers, whose output, in quantity and excellence, ranks in Europe second only to that of Great Britain. Brewing, spinning, weaving, lace-making, and wood-carving were domestic occupations in which German agriculturists in the less fertile regions acquired rare skill, before the introduction of steam-power localized the national industries in factory towns. Technical education has kept pace with material development. Smelting and the manufacture of iron, machinery, instruments, malt liquors, woodenware, and textiles take first place among industrial enterprises. The manufacture of beet-root sugar is also an important industry, having several hundred factories. The annual production of beer is also enormous.

Germany's chief exports are manufactures; its chief imports, foodstuffs and raw materials. The total of import values exceeds that of exported goods by nearly one-fourth. The merchant marine which carries the oversea trade of the German Empire is, among those of European States, second only to that of Great Britain. The railway system, operated mainly by the Government, is surpassed only by that of the United States. The extended system of internal waterways is of great utility, especially to Northern Germany.

COMEDY THEATER, BERLIN

NATIONAL GALLERY, BERLIN

The National Gallery of Berlin, erected during the decade preceding 1876, was designed in accordance with a plan of Frederick William IV. A large collection of paintings is now in the building.

German States and Cities. The greater part of the population of Germany are Teutonic, the non-Germanic elements comprising only about 7 per cent of the whole. The rise of Germany as an industrial State has been followed by a general movement of population toward the cities. The residents of towns of 2,000 inhabitants or more constitute fully 60 per cent of the people.

The Kingdom of Prussia, area 134,603 square miles, is the largest German State. The ruling house is that of Hohenzollern, in which, also, the imperial dignity is hereditary. The Prussian Diet consists of a House of Lords, composed of hereditary, appointive, elective, and ex-officio members, and a House of Deputies consisting of 433 members, indirectly elected. Education is general and compulsory and largely aided by the State. There are universities at Berlin, Königsberg, Greifswald, Breslau, Halle, Kiel, Göttingen, Münster, Marburg, and Bonn.

With respect to its acreage, rye is the principal crop, being grown throughout the kingdom. Other agricultural products are oats, potatoes, wheat, barley, maize, peas, millet, hemp, rape-seed, linseed, flax, hops, tobacco, orchard fruits, vegetables, grapes, and sugar-beets. Much live stock is raised. The forests are chiefly fir. The mineral products include coal, lignite, salt, iron, zinc, silver, and others. The principal manufactures are linens, cottons, silks, woolens, shawls, carpets, leather, earthenware, glass, paper, tobacco, beer, metal-work, and machinery.

Berlin, the capital and commercial metropolis of the kingdom and also of the empire, had its origin early in the 13th century in a small settlement established on an island lying in the Spree River. The establishment of the royal residence at Berlin by the Elector John Cicero of Brandenburg laid the political foundation of Berlin's future greatness. It is a very important railway center, and its manufactures are various. Since 1881 Berlin has been separate from the province of Brandenburg, of which Charlottenburg is the largest town. Charlottenburg, however, is practically a part of Berlin, with which it is connected by the celebrated boulevard, Unter den Linden. Potsdam, the seat of government for Brandenburg, is situated on an island in the Havel River, southwest of Berlin.

UNTER DEN LINDEN, BERLIN

The finest street in the city of Berlin is known as Unter den Linden, taking its name from the lime-trees that flank it on either side. It is 196 feet wide. It was first laid out in the time of Friedrich Wilhelm (1640-1688) and has since been lengthened and beautified. From the palace gate to the Brandenburg Gate, the street is one mile long.

Stettin, the capital of Pomerania, is not only the chief seaport of that province but also serves as the Baltic Sea outlet for Berlin, ninety miles distant by rail. Its situation at the mouth of the Oder River gives it communication with the interior by water also.

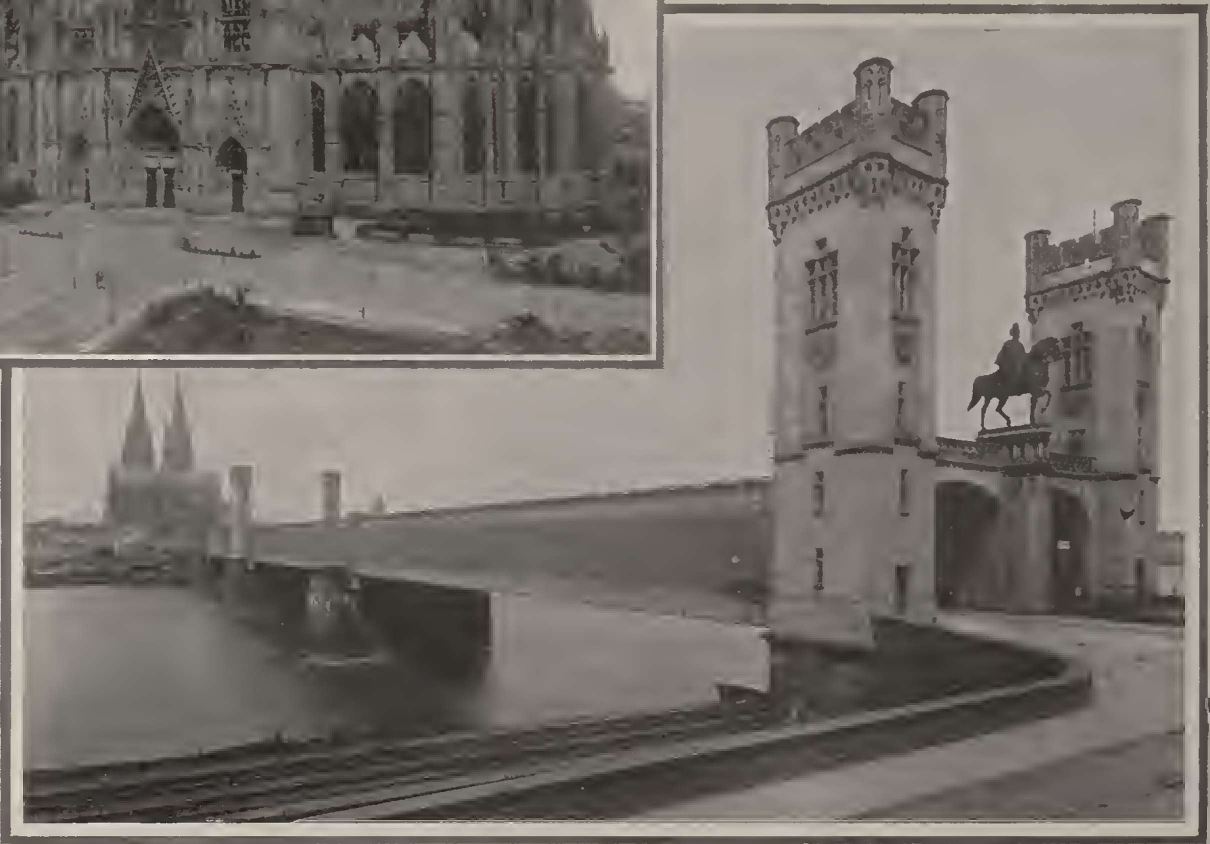
Danzig, near the mouth of the Vistula River, serves as a center of export both for the wood and wheat of Russian Poland and for that produced in West Prussia, of which province it is the capital and commercial center. Königsberg, the capital of East Prussia, situated on the Frische Haff at the mouth of the navigable Pregel River, sustains much the same relation to the Baltic provinces of Russia as does Danzig to Russian Poland.

Posen, the capital of the province of the same name, is one of the most ancient of Polish towns. Like Frankfort-on-the-Oder, it derives importance from its situation at a crossing-point on a large river, the Warthe. Situated on the main line of approach from

Russia to Berlin, Posen is strongly fortified. Breslau, the capital of Silesia, from the time of its founding in 758, was destined by its situation on the Oder River to become a great commercial center; it is the largest wool market in Europe. Magdeburg, the capital of the Prussian province of Saxony, situated on the Elbe River,

COLOGNE CATHEDRAL

The Cologne Cathedral is probably the finest Gothic edifice in the world. Begun in 1248, it was not completed until 1880.



IRON BRIDGE OVER THE RHINE

East of the Cathedral a fine iron bridge, 1,359 feet long and wide enough for a double line of rails and a roadway, crosses the Rhine.

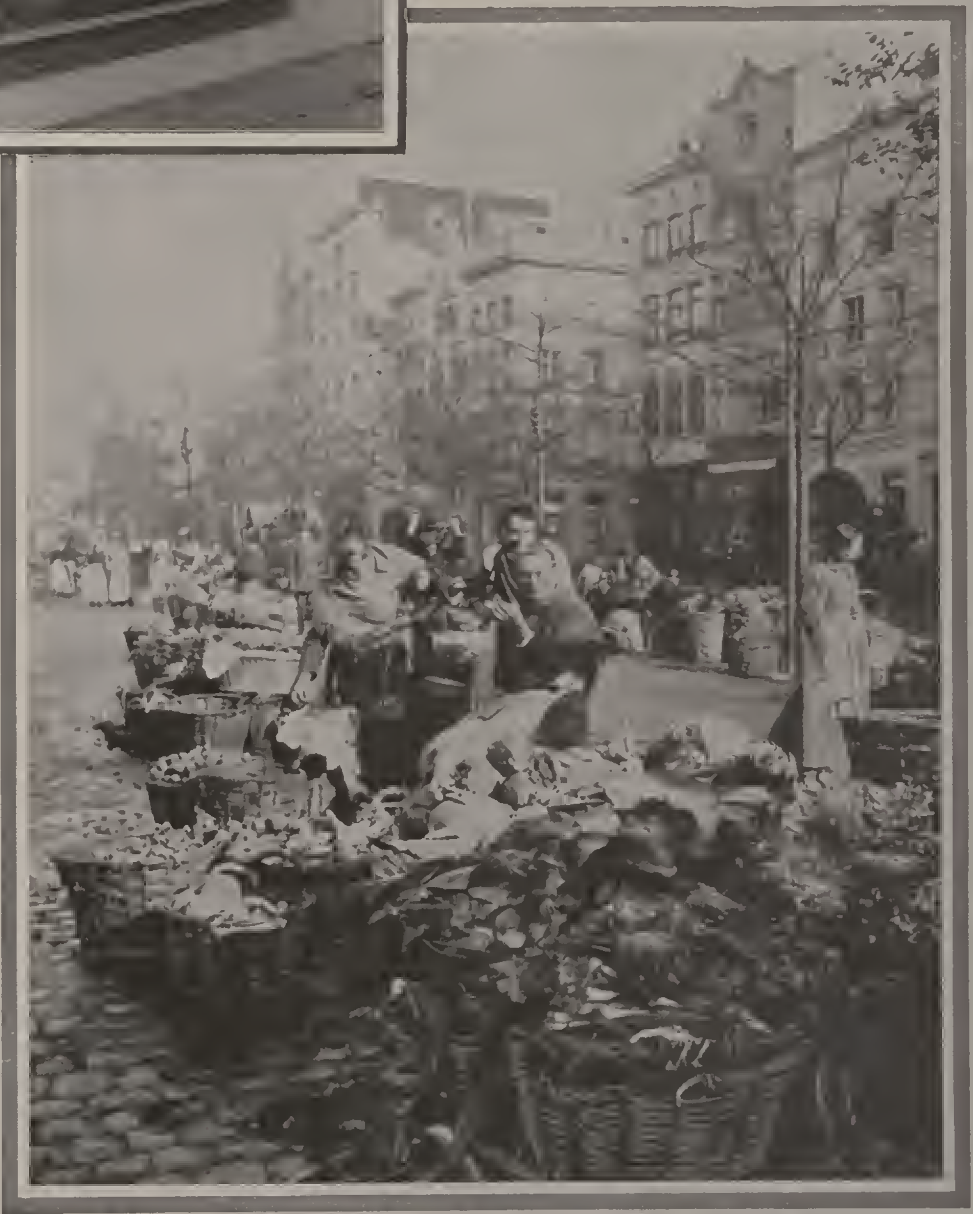
is a fortress of the first rank. It is the center of an extensive sugar-beet region, and is noted for its iron-foundries and machine-shops. Halle, on the Saale River, has extensive salt deposits and manufactures of agricultural machinery, sugar, and starch. Hanover, the capital of the province and the former kingdom of the same name, is situated in a level region at the head of navigation on the Leine River. Direct water and rail communication with Bremen, and railway lines to Hamburg and other cities, give the city its commercial importance. Altona, on the Elbe River near its mouth, immediately adjoins the free city of Hamburg and has important manufactures. Kiel, besides being the center of trade between the Danish islands and the Continent, is the headquarters of the German navy. Frankfort-on-the-Main, the principal city of the province of Hesse-Nassau, is famous for its literary, scientific, and art institutions, which date back to the time when the city was the intellectual metropolis of the German people. Münster, the capital of Westphalia, was formerly a prosperous member of the Hanseatic League and is now a center of important manufactures of cloth, etc. Dortmund, the center of an important mining district, is famous for its machinery. By means of the Dortmund-Ems Canal, 150 miles long, water communication with the North Sea has been provided. Coblenz, important for its manufactures and its trade in wines and champagnes, is the capital of the Rhine Province or Rhenish Prussia; Cologne, the center of the Rhine trade, is the most important city. Its principal manufactures are sugar, tobacco, and eau de Cologne. Its cathedral, situated on an eminence sixty feet above the Rhine, is regarded as the most magnificent Gothic edifice in the world. The mineral resources of the Rhine Valley are what have given industrial importance to Essen, the seat of the famous Krupp armor-plate and ordnance works.

The State and Free City of Hamburg, in form of government a republic, has an area of 158 square miles. The city of Hamburg is the second town of Germany in point of size and the first in commercial importance. Its trade is international and it stands next after London, Liverpool, and New York as a world mart. The situation of Hamburg and Altona at the head of the long, deep estuary through which the Elbe River flows to the North Sea, enables the largest Atlantic liners to dock at the great quays that border the harbor. Cuxhaven, the North Sea outport of Hamburg and Altona, is open throughout the year. The Kaiser Wilhelm Canal, opened in 1895, extends from the Elbe River above Brunsbüttel to the Baltic Sea at Holtenau near Kiel, but it has not diverted Hamburg trade.

The State and Free City of Bremen, with an area of ninety-nine square miles, is, like Hamburg, governed as a republic. Its present outport is Bremerhaven. As a port of emigration from Germany and from Europe in general, Bremen surpasses Hamburg.

The State and Free City of Lübeck (area 115 square miles) is the third of the old Hanse towns retaining a republican form of government to the present time. When the Baltic Sea trade was of greater importance, Lübeck, furnishing an outlet for the products of Western Germany, enjoyed great prosperity.

The Grand Duchy of Mecklenburg-Schwerin, situated on the Baltic Sea coast and surrounded by the territories of Prussia, has an area of 5,135 square miles. The political institutions are wholly feudal, the Diet being composed of the knights and burgomasters of the forty-eight towns. The chief products of the grand duchy are rye, oats, hay, potatoes, wheat, and barley. Its principal towns are Schwerin, the capital, and Rostock, the latter the seat of a university.



MARKET IN COLOGNE

Cologne, in Rhenish Prussia, was founded before the Christian era. In the Middle Ages it was the center of trade for the Rhine provinces, and made commercial treaties with foreign powers. After a long period of decadence, its trade has revived within the last half-century. The famous market-gardens around Cologne are mainly tilled by women, who daily display their produce in the city.

The Grand Duchy of Mecklenburg-Strelitz consists of two separate and unequal divisions lying east and west of Mecklenburg-Schwerin. Its area is 1,131 square

miles. The institutions are feudal, more than one-half of the territory being the personal property of the Grand Duke. Agriculture and grazing are the principal industries.

The Grand Duchy of Oldenburg is surrounded on three sides by the Prussian province of Hanover, and its northern boundary is the North Sea. A deep estuary of that sea, the Jade Busen, indents the coast here, but the principal port thereon, Wilhelmshaven, belongs to Hanover. The area of the grand duchy is 2,479 square miles, and the political institutions are modern and constitutional. Agriculture and grazing are the principal industries.

The Grand Duchy of Hesse consists of two distinct territories, separated by a narrow portion of Hesse-Nassau. The Rhine flows through the southern of the two divisions. The area of the grand duchy is 2,965 square miles. Agriculture and manufacturing are chiefly followed. Darmstadt, the capital, lies in the midst of a plain deficient in fertility, but it is a railway center of importance and has some manufacturing enterprises. Mainz (Mayence), on the Rhine River opposite the mouth of the Main River, has developed an extensive commerce, especially in wine, by river and rail, and has important manufactures of leather and furniture.

GERMANIC NATIONAL MUSEUM, NUREMBERG

One of the interesting features of the old town of Nuremberg, Bavaria, is the Germanic National Museum, for the illustration of Germanic history. The building is a Gothic structure of the 14th century, once a Carthusian monastery, to which numerous additions have been made.

The Imperial Land of Alsace-Lorraine comprises the territories ceded by France at the conclusion of the Franco-Prussian War of 1870–71. The area is 5,604 square miles. The chief administrative officer is the "Statthalter" or Governor-General, appointed by the Emperor. Wines, tobacco, hay, oats, wheat, and potatoes are the principal products, and the mines and manufactures of the province are important. Strassburg, the capital, is also the chief town of the annexed provinces. Commanding the route from Paris over the Vosges Mountains, Strassburg is strongly fortified. Its manufactures are of considerable importance. The city is the seat of a university. Mülhausen, near Basel, is the most important cotton-manufacturing town of Southern Germany.

The Grand Duchy of Baden, which occupies the Black Forest region and its western slope to the Rhine River, has an area of 5,821 square miles. The government is constitutional. There are two universities, located at Heidelberg and Freiburg. Primary education is general and compulsory. Of the area of Baden, 37.7 per cent is forest land and 57.1 per cent is under cultivation. Salt and building-stone are found, and there are many manufactories. Mannheim, situated near the junction of the Neckar and Rhine rivers, is the principal river port and the chief commercial center.

THE AMMER RIVER, OBER-AMMERGAU

KOFEL MOUNTAIN, NEAR OBER-AMMERGAU

Ober-Ammergau, a Bavarian village on the Ammer River, is famed the world over for the performance there, every tenth year, of a play representing the passion and death of Christ. This play commemorates the deliverance of the village from a plague early in the 17th century. Visitors come from every part of the globe to witness it.

IN THE VILLAGE OF OBER-AMMERGAU

The Kingdom of Würtemberg, lying east of Baden, occupies the eastern slopes of the Black Forest and the Odenwald and extends along the southwestern extremity of the Swabian-Bavarian Plateau. It has an area of 7,528 square miles. Through the southern portion of the kingdom flows the Danube River, a tributary of which, the Iller River, forms part of the southeastern boundary. The monarchy is constitutional and hereditary. Official returns declare that not a person in the kingdom above the age of ten years is unable to read and write. There is one university, located at Tübingen. Of the entire area of Würtemberg, 64 per cent is under cultivation and 31 per cent is under forests. Agriculture is therefore important, and the production of grains and fruit is large. The mineral product is also considerable. The manufactures in general include textiles, iron and steel goods, paper, leather, and pottery. Stuttgart, the capital of the kingdom, situated on the left bank of the Neckar River, is noted for its cotton-mills and extensive manufactures of machinery. Ulm, at the head of navigation on the Danube River, has a flourishing trade.

The Kingdom of Bavaria, the southeasternmost of the German States, has an area of 29,282 square miles. The sovereign House of Wittelsbach is Roman Catholic, a faith professed by two-thirds of the population. The monarchy is constitutional and hereditary. There are three universities, located at Munich, Würzburg, and Erlangen. Agriculture, brewing, wine-making, and mining occupy the people. Munich, the capital of Bavaria and the third city of Germany in size, is situated on the Isar River. Its manufacturing industries have suffered from lack of coal, the exception being the brewing of beer, in which industry the city leads the world. It has much commercial importance and is the center of the celebrated art and art industries of Southern Germany. Nuremberg, the central city of the region north of the Danube River, is the foremost manufacturing and commercial center of Bavaria. It is noted for its toys and as a hop market.

The Kingdom of Saxony, situated on the Austrian frontier between Bavaria and Silesia, is a fertile country traversed from southeast to northwest by the Elbe River. Its area is 5,787 square miles and it is more densely populated than any other German State except those containing the free cities. The ruling House of Saxony is Roman Catholic, but of the inhabitants 95 per cent are Protestant. The monarchy is constitutional and hereditary. Saxony is an industrial State and, in proportion to size, the most active in Germany. Textile industries rank foremost, but mining and metal-working are also important, as are brewing and distilling. Dresden, the capital, has an active

FORTRESS AND TOWN OF EHRENBREITSTEIN

On the right bank of the Rhine, opposite Coblenz, lies the little town of Ehrenbreitstein, at the foot of a rocky height, crowned by the famous fortress of the same name. A very ancient stronghold here played an important part in mediæval wars, but was taken by the French in 1799 and destroyed. The present fortress was built in 1816–26. It will lodge 100,000 men, but is so planned that 5,000 men can effectively defend it.

trade and a variety of manufactures, but is noted chiefly for its art collections. Leipzig has attained commercial prosperity despite the fact that it is not situated on a navigable waterway. The University of Leipzig is one of the largest in Germany.

The two Principalities of Reuss (Elder Branch) or Reuss-Greiz and Reuss (Younger Branch) or Reuss-Schleiz are small States of Central Germany, the greater part of their territory being the private property of the ruling families. The principality of the elder branch has a territory of 122 square miles, and its capital is Greiz Agriculture is the chief industry, but the principality has some manufactures. Of the principality of the younger branch the area is 319 square miles, and the capital Gera. Manufactures are flourishing.

The Duchy of Saxe-Altenburg lies southwest of the territory of the Reuss-Greiz. Its area is 511 square miles, and its capital is Altenburg.

The Duchy of Saxe-Coburg-Gotha has a total area of 755 square miles, and agriculture is the principal industry. Consisting of two distinct duchies, Franconian and Thuringian, the State has two capitals, Coburg and Gotha, the latter renowned as the seat of the famous geographical establishment of Justus Perthes.

The Duchy of Saxe-Meiningen is a hereditary constitutional monarchy. Its area is 953 square miles, and the principal industry is that of agriculture. Meiningen is the capital. Sonneberg is the greatest doll-making town in the world.

The Grand Duchy of Saxe-Weimar consists of three detached districts—Weimar, Eisenach, and Neustadt Its area is 1,388 square miles. The University of Jena is common to the four Saxon duchies.

The Principalities of Schwarzburg are isolated States of Central Germany and are of little industrial or commercial importance. Each has a constitutional government. The area of the northern principality, that of Schwarzburg-Sondershausen, is 333 square miles. The southern principality, Schwarzburg-Rudolstadt, has an area of 363 square miles.

The Principality of Waldeck has an area of 433 square miles; the Principality of Lippe an area of 469 square miles, and the Principality of Schaumburg-Lippe one of 131 square miles. All of these principalities have constitutional governments.

The Duchy of Brunswick, which lies south of Hanover, has an area of 1,424 square miles. The capital, Brunswick, is a center of manufactures.

The Duchy of Anhalt, lying south of Magdeburg and wholly surrounded by Prussian territory, has an area of 906 square miles. Agriculture is the principal industry. Dessau, the capital city, is famous for its art collections.

German History in Outline. A century before the beginning of the Christian era various northern tribes had become well known to the Romans. The Cimbri and the Teutones had pressed into the Roman territory south of the Danube River, had defeated the imperial army, and had even hovered about Rome, but the legions of Marius had finally crushed them. In their own land, however, these sturdy tribes proved invincible to the Roman arms, and although Varus advanced again and again into the Teutoburger-Wald with his armies, he never succeeded in effecting a substantial lodgment in the northwest. By the fourth century A. D. a mighty confederation of Germanic tribes along the Vistula and Elbe rivers had extended its dominion to include a vast territory lying between the Baltic and Black seas. For many centuries the conflict for supremacy on German soil was chiefly between the Franks and the Saxons, the latter of whom remained unsubdued and unconverted until the time of Charlemagne. On the dissolution of the empire of Charlemagne the Eastern Frankish Empire, comprising what is now Germany, became merely a number of petty and powerless fragments, loosely held together under an overlordship scarcely more than nominal.

The early movements of population may be traced, generally, in the present physical type of the people and, with greater accuracy, in their language. The true German type, fair-skinned with light hair and eyes, prevails in the north, but in the south strains of the ancient Celtic blood are revealed in the dark hair and eyes that distinguish more than one-fifth of the population. The Germanic races were slow in spreading over the southern country and the result was a

THE MOSELLE BRIDGE, COBLENZ

Where Coblenz, the capital of Rhenish Prussia stands, at the union of the Rhine and Moselle rivers, the Romans built a military post about 9 B. C., which they called "Confluentes," whence the modern name. This old bridge over the Moselle was erected in the 14th century. It is of free stone, 1,100 feet long, with fourteen arches.

SAXON PEASANT GIRL AND GRANDMOTHER

gradual fusion of types instead of an abrupt supersession of one type by another. Where the Low Saxons colonized the Slavonic lands on the Baltic coast the Low German tongue early became the spoken language, and in that part of the empire dialects of this origin are still used by about 10,000,000 people. The High German language is a derivative of the Low; its spread has been from the highlands of Bavaria and Swabia toward the north into Prussia and Saxony, to the gradual displacement of the Low German tongue.

THE CITY OF STRASSBURG

Strassburg, capital of Alsace-Lorraine, was founded by the Romans during the early years of the Christian era. It was a German city until seized by Louis XIV. of France in 1681, and was restored to Germany after the Franco-Prussian War. The high building in the picture is the Cathedral of Notre Dame, known as one of the most beautiful churches in the world. Its tower is 466 feet high.

In the 11th century Germany acquired a position of great importance among the powers of Europe and came to have a controlling voice in the election of the popes. The 13th century was a period marked by the union of commercial cities into confederations. Mainz, Worms, Cologne, and Strassburg, with other towns, formed the Rhenish Corporation, which was organized to repel the forays of the robber knights, while Hamburg and Lübeck became the foremost members of the Hanseatic League, at one time numbering ninety towns, which was formed to protect the German sea commerce from the Norse Vikings. Again under Charles V., King of Spain, elected to rule over the Holy Roman Empire in 1519, Germany was the dominant power in Europe, but the religious intolerance of the Government, together with the reaction that found expression in the widespread movement known as the Reformation, had the effect of weakening the empire and sowing the seeds of the Thirty Years' War, which convulsed all Europe in the first half of the 17th century. It was 200 years before Germany recovered from the long strife that destroyed industry and commerce, impoverished and disheartened the people, and distributed the imperial territories among a multitude of practically absolute monarchs.

Of the host of ruling houses among which the empire was divided, two rose to permanent importance—the House of Hapsburg and the House of Hohenzollern, rivals in a long struggle for German supremacy. In 1415 the latter of these two houses acquired the Electorate of Brandenburg, out of which as a nucleus grew the Kingdom of Prussia, a great northern Protestant State, the only rival of which in the German Empire was Roman Catholic Austria. During the greater part of four centuries the Hapsburgs were supreme. In the Seven Years' War (1756–63) Prussia struggled against the combined power of Austria, France, Russia, Saxony, and Sweden, and in the end retained the Austrian province of Silesia, the seizure of which had precipitated the strife. Under the influence of Napoleon the empire crumbled, and in 1806 Francis II. abdicated the throne and styled himself Emperor Francis I. of Austria. For sixty-five years there was no German Empire. Prussia, in the meantime, had joined the allied powers in crushing Napoleon, and the Congress of Vienna in 1815 had formed the German Bund or Confederation, of which Austria was the head. This league was dissolved in 1866 as a result of the war between Austria and Prussia over the Schleswig-Holstein question. From the North German Confederation, then formed under Prussian leadership, Austria was excluded. The Franco-Prussian War (July, 1870, to January, 1871) aligned the South German States, with the exception of Austria, on the side of Prussia, and on January 18, 1871, at Versailles, King William I. of Prussia was proclaimed the German Emperor. His grandson, William II., succeeded to the throne in 1888, which he still (1903) occupies.

The material prosperity of Germany during the century just closed is indicated by the steady growth of its population, in spite of wars and a continuous outgoing current of emigration. From 1816 to 1900 the average annual increase was 1.3 per cent. The population of the empire, December 1, 1900, was 56,367,178. The increase from 1895 to 1900 was at the rate of 1.5 per cent yearly, larger than in any previous five-year period of the century.

Government and Education. Although the sovereignty of the German States is recognized in the imperial constitution, their autonomy as regards foreign relations is merged in that of the empire. The control of the army and navy, power of declaring war, imposition of excise and customs duties, regulation of trade and commerce, and administration of posts and telegraphs belong to the Central Government. In Bavaria and Würtemberg, however, the posts and telegraphs are not included in the imperial administration. The Kaiser is the international representative of the empire. He may on his own initiative declare a defensive war or make peace. To declare an offensive war, however, the Bundesrath, representing the individual States, and the Reichstag, representing the nation, must consent. The Governments of the several States appoint the fifty-eight members of the Bundesrath for each session; the people of the separate States, by universal suffrage, name their deputies in the Reichstag, of which the members number 397 and are elected for five years. In these two bodies the legislative functions of the Imperial Government are vested. The Emperor has no veto power affecting their acts.

The educational system of Germany is an object of national pride. Instruction is compulsory throughout the empire. The gymnasia, or classical preparatory schools, the Realgymnasia, or Latin preparatory schools, the Progymnasia and Realprogymnasia, and other secondary schools, are thoroughly organized in Prussia and in varying degrees in the other States. The elementary schools, which are largely aided by the State, are admirably sustained. Matriculation in any one of the twenty-one universities qualifies for admission to all others. Polytechnic institutions and schools of commerce and agriculture have attained a high development.

BORDER OF THE PEGNITZ RIVER, NUREMBERG

The old city of Nuremberg is divided by the Pegnitz River into two nearly equal parts The above view is of the point where the river itself divides to inclose the large island of Schutt. Just north of this bend is the Jewish Synagogue, a fine structure in the Moorish style, built in 1869–74.

AUSTRIA-HUNGARY

AUSTRIA-HUNGARY lies between 42° and 51° N. lat. and 10° and 26° E. long. Its greatest length, from east to west, is about 800 miles and its extreme breadth is approximately 600 miles; it embraces an area of 240,942 square miles (exclusive of the Turkish Provinces of Bosnia and Herzegovina), of which 115,903 square miles represents the area of Austria and 125,039 square miles that of Hungary. Though of so great extent, Austria-Hungary has a sea-coast line of but 500 miles, along the Adriatic Sea on the south. No other country includes such varied physical features, climates, and nationalities.

FRANZ JOSEF I.

The present Emperor succeeded to the crown of Austria through the revolution of 1848. Nineteen years later, when the Austro-Hungarian Monarchy was reorganized, he became also King of Hungary.

Mountains. Austria-Hungary is one of the most mountainous countries of Europe; the western portion embraces part of the lofty Eastern Alps, which extend eastward to the valley of the Danube. Their southernmost group, forming the line of demarcation between Italy and Austria, bends to the south and is continued in parallel chains, of which the most important are the Julian and Dinaric Alps. The northern boundary is determined by a nearly continuous succession of mountain ranges, consisting of the Riesengebirge and other ranges of the Sudetes, the Erzgebirge, and the ridges of the Bohemian Forest (Böhmerwald). Farther east are the Carpathians, which, starting in the northwest near the Danube River at Pressburg, extend in a wide semicircle, exceeding 800 miles in extent, to Ó Orsova (Alt Orsova), also on the Danube, in the extreme southern part of Hungary. Their principal divisions are the Little Carpathian Mountains on the west, the Tatra Mountains on the north, the Carpathians proper on the northeast and east, and the Transylvanian Alps on the south. The Great Hungarian Plain, located in the center of the country, has an area of about 30,000 square miles; the Little Hungarian Plain, constituting part of the Danube Valley, is about 4,200 square miles in extent. North of the Carpathians are the Great Plains of Galicia. The highest peaks of Austria-Hungary are Ortlerspitze (12,810 feet), in the Rhætian Alps, and Gross-Glockner (12,455 feet), in the Noric Alps. In many portions of the country the mountains are covered with forest and vegetation to great heights and at their bases are fertile valleys, but in Tirol, Styria, Carinthia, and Carniola the surface presents a wild confusion of irregular mountain masses culminating in rugged peaks whitened by the snows of centuries, down whose naked and precipitous sides glaciers move to the rivers and valleys below. In Tirol the limit of glacial flow progresses and retreats at irregular intervals; during the latter part of the 18th and the beginning of the 19th century it advanced steadily, burying pastures and mountain roads.

Course of the Rivers. The larger rivers of Austria-Hungary form for the most part divisions of the Danubian drainage system. Among the numerous rivers uniting with the Danube the principal ones on the south are the Inn, Traun, Enns, Raab, Drave, and Save; those on the north are the March, Waag, Theiss, and Temes. Other waterways of importance are the Vistula flowing north, the Dniester emptying into the Black Sea, and the Adige flowing south to the Adriatic, the last two having no navigable affluents.

The Danube, next to the Volga the largest river of Europe, has a drainage area of 315,000 square miles. It rises in two small streams on the eastern slopes of the Black Forest, in Germany, and flows in a northeasterly direction to Ratisbon, Germany, whence its course swerves to the southeast. Beyond Vienna the river enters the vast plains of Hungary, and, having passed through the "Porta Hungarica," formed by various spurs of the Alps and Carpathians near Pressburg, separates into numerous arms, forming a multitude of islands; this portion of its course, called the Schütt, extends to Waitzen, whence the river flows southward until joined by the Drave,

HOUSES OF PARLIAMENT, VIENNA

Vienna, since 1867, has been joint capital with Budapest of Austria-Hungary. On the famous Ring Strasse, set between the Rathhaus Park, the Volksgarten, and Schmerling Platz, stand the imposing Houses of Parliament. The Chamber of Deputies is on the right and the Upper House on the left, while the wings are used for various offices.

when it turns to the east. Below Bázias the stream is hemmed in by outliers of the Transylvanian Alps on the north and by the Servian Highlands on the south; this part of the Danube, called the Klisura (defile), extends for about eighty miles to Ó Orsova, near the Roumanian frontier. Here the river is obstructed by cataracts and rapids. At this place, also, the "Iron Gates," where the channel was narrowed between rocks and reefs, once caused wrecks without number. However, the Hungarian Government has now cleared the rocky bed of the Iron Gates and by the building of canals has opened a new channel in the river, thus removing the dangers to navigation. Below Ó Orsova the river bends toward the south and enters the Black Sea through several channels, which form a delta. The total length of the Danube is 1,800 miles and it is navigable to Ulm, in Würtemberg.

The Inn River rises on the southern slope of the Albula Mountains and empties into the Danube at Passau; it is 320 miles in length and is navigable for steamers to Simbach. The Traun River originates on the Gross-Hochkasten, in Styria, flows first to the west and then northward, passing through Lakes Hallstadt and Traun, and after a course of 100 miles unites with the Danube near Linz. The Enns River takes its rise not far from Radstadt, in Salzburg, flows east and then swerves to the north, discharging into the Danube. It is 112 miles in length but is unnavigable throughout its course. The Raab River originates in Eastern Styria and after a course of 158 miles enters the Danube west of Komorn. The Drave River has its source in Tirol and after an easterly course of 380 miles joins the Danube fourteen miles east of Eszek (Esseg); it is navigable for rafts and flat-bottom boats as far as Villach, in Carinthia. The Save rises in the Julian Alps and has a course of 660 miles; it discharges into the Danube at Belgrade. Steamers can ascend to Sisek, at the mouth of the Kulpa. The March River rises in the Sudetes and after flowing southward for 180 miles empties into the Danube near Pressburg; it is navigable for fifty miles. The Waag River, originating in two head streams near the frontier of Hungary, flows at first toward the west, then turns to the south with an entire course of 200 miles, flowing into the Danube at Komorn. The Theiss River rises in the Carpathians, on the borders of Galicia, and unites with the Danube east of Peterwardein. It is 500 miles in length and navigable for the greater part of its extent. The Temes River rises among the Carpathians, flows through an exceedingly tortuous channel, and meets the Danube near Belgrade. Although this stream has a course of 270 miles, a line drawn directly from its source to its mouth would be only seventy-one miles in length.

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1. CHATEAU MIRAMAR, NEAR TRIESTE—2. GROSS-GLOCKNER, NORIC ALPS
3. THE DÜRRENSEE AND MONTE CRISTALLO

1. Overlooking the Adriatic, some five miles from Trieste, stands the Château Miramar. Here the unfortunate Emperor Maximilian spent the few quiet years of his life, before accepting the crown of Mexico. 2. This peak, on the easternmost bound of the Tirol, is the highest in the Noric Alps (12,454 feet). The summit, which is a meeting point for the three provinces of Salzburg, Tirol, and Carinthia, commands a magnificent view. 3. The Höhlensteiner Valley in the Tirolese Alps, little more than a narrow gorge, widens here between Monte Cristallo and the Dürrenstein to form the basin of the glacier-fed Dürrensee.

The Vistula, one of the longest rivers in Europe, originating on the Silesia-Galicia frontier, forms part of the boundary between Austria-Hungary on the one hand and the German and Russian empires on the other. Near Sandomierz it enters Poland; thence its course is across the latter country and through Prussia, until it empties into the Bay of Danzig, an indentation of the Baltic Sea. The Vistula is 652 miles long and is navigable for 622 miles. The Elbe has its source on the southern slope of the Riesengebirge, in Bohemia, enters Germany, and empties into the North Sea. This river is navigable to Melnik in Bohemia. Its principal affluent, the Moldau, rises in the mountains of the Bohemian Forest, flows southeastward, then swerves to the north, and ultimately unites with the Elbe at Melnik, after a course of 270 miles. The Dniester River takes its rise among the Northern Carpathians, flows through Galicia and Bukovina, enters Russia, and discharges into the Black Sea, its total length is 853 miles and it is navigable throughout a wide expanse of populous territory. The Adige River originates in Tirol, flows southward, then westward, and again southward, entering Italian territory about five miles east of the Lago di Garda, and emptying into the Adriatic Sea near Chioggia, Italy. It has a length of 234 miles and is navigable to a point not far below its confluence with the Eisack.

Austria-Hungary has many lakes, and some of them are of unusual extent. First in size is Balaton Lake (the Platten See), located at the base of the forest of Bakony fifty-five miles southwest of Budapest; it has an area of about 266 square miles. Its brackish waters receive thirty streams. The Neusiedler-See, near Pressburg, has an area of 148 square miles. This lake, although in places thirteen feet deep, has on several occasions dried up, notably in 1693, 1738, and 1865. The most remarkable body of inland water in the monarchy is the Lake of Zirknitz in Carniola, which often disappears entirely for weeks or even months at a time in dry seasons. There is no regularity about the disappearance of its waters; sometimes five or six years will elapse without their vanishing, but generally they disappear in August, returning during the wet season. This phenomenon arises from the fact that the lake has underground connections with the Laibach River and with the caves of Adelsberg.

Geology. The geological formations, although varied in character, show a unity of type. The central part of the Alpine range in the east is made up of primitive rocks, vast masses of gneiss and granite. The north and south ranges are of limestone, while farther to the north beds of sandstone are on the limestone, in which coal also occurs. The central Carpathian range is largely Silurian in character, and is rich in gold and silver. Both north and south are stone deposits, next to which lie the coal-measures. The plains and valleys of Austria belong chiefly to the middle period of the Tertiary age.

THE FLORIANE GATE, CRACOW

This is one gate of the original town wall, and shows something of the old battlements. Within the gate is a shrine, before which the devout pilgrims pause to pray.

Climate, Flora, and Fauna. The climate of Austria-Hungary presents great diversities, a fact due to its location in the interior of the Continent and to the striking irregularities of its surface. The western section is partly subject to the influence of the Atlantic Ocean; the continental climate, with its extremes of temperature, prevails in the east; along the Adriatic coast the summers are dry and warm and the winters mild, and upon the Alpine and Carpathian heights the climate is not essentially different from that of the Arctic regions. The mean annual temperature at Trieste on the Adriatic Sea is 57.1°; at Vienna, 48.8°; at Lemberg in the province of Galicia, 44.6°. Olives, grapes, maize, and other products of the tropical and temperate zones attain perfection in the southernmost localities. In the central region, between 46° and 49°, all products of the temperate zone flourish in abundance, while north of 49°, except in sheltered localities, neither the vine nor maize thrive, but wheat, oats, rye, barley, fruits, flax, and hemp yield bountiful harvests. At the highest meteorological station, which is on Sonnblick Mountain (10,170 feet), the winter is that of Northeastern Russia and the summer that of Franz Josef Land in the Arctic regions. In this region the tree limit is found at an elevation of from 6,000 to 7,000 feet and the cultivated fields at about 4,000 feet; but no village occupies a site above the last-named altitude. In Bohemia the climate of the interior lowland is pleasant, the summers being warm and the winters not severely cold. In Moravia and Silesia the climate is generally mild; and that of Galicia and Bukovina is continental, with hot summers and rigorous winters. The climate of the highlands is subject to sudden changes; snow does not remain in the summer except in the gorges of the higher Tatra Mountains. The rainfall varies with the climate, the eastern section

INNSBRUCK

Innsbruck, the capital of the Tirol, in the valley of the River Inn, surrounded by the snow-capped peaks of the German Alps, which tower above the green valley, is one of the most picturesque cities of Europe. Salzburg alone rivals it in situation.

GRAZ, IN STYRIA

Graz, a city of some 30,000 inhabitants, is the capital of the province of Styria. The castle crowning the hill in the foreground saw many a battle with the Turks, before it was destroyed by the French in 1809. Graz is still a garrison town.

usually receiving a smaller amount of moisture than the western.

The remarkable variations of climate naturally give rise to corresponding diversity of vegetation, ranging from arctic and alpine to marsh and steppe varieties, and including the floras of mountain, hill, and plain. Hungary, Bohemia, Moravia, and Galicia, are the principal grain-growing regions. The extensive plains of Hungary are natural meadows, having a vegetation resembling that of the steppes of Europe and Asiatic Russia; but the richest grazing-lands are located in Upper Styria, Salzburg, and Tirol. The forests of the monarchy, especially in the mountain districts, are often of great extent. In the south are situated large areas practically devoid of vegetation.

The fauna includes wild boars, deer, goats, hares, bears, wolves, lynxes, foxes, wildcats, jackals, otters, beavers, polecats, martens, and weasels, together with the common domestic animals. Eagles, hawks, and many varieties of song-birds are common. The lakes, rivers, and sea-coast abound in fish.

Resources and Industries. Agriculture forms the leading industry in the monarchy, furnishing employment to about 60 per

cent of the inhabitants The principal farm products are barley, wheat, maize, oats, rye, potatoes, beets, and grapes. The wheat grown on the fertile Hungarian plains is famous for its excellence. The raising of live stock is largely engaged in, particularly in Hungary and the Alpine provinces; in the latter, cattle and cheese form the chief items of export.

The lumber interests are considerable, most of the product coming from the Carpathian and Bohemian forests. Manufacturing industries of late have been greatly developed, especially in Austria, but the monarchy can by no means be called a great manufacturing country. The manufacture of iron products is pursued largely in Moravia, Silesia, and the Alpine provinces. Textile industries flourish throughout Western Austria; the products include cotton, woolen, and silk goods. Embroidery is an important occupation in the Alpine provinces, and Vienna is the center of the manufacture of clothing. Bohemia is renowned for its cut-glass wares and for its beer, especially the brew of Pilsen; it also has extensive paper-mills, sugar refineries, and porcelain factories. Hungarian wines, particularly the brand known as Tokay, are much esteemed for their delicacy of flavor, and the inhabitants of Galicia and Bukovina engage largely in the distilling of brandy. Other important manufactures are food preparations, tobacco, leather, carriages and wagons, and the products of printing and chemical establishments.

For variety and extent of mineral resources the monarchy ranks among the first in Europe. Its rock formations contain rich deposits of coal, iron, quicksilver, copper, lead, gold, silver, zinc, building stones, alum, graphite, antimony, manganese, sulphur, salt, petroleum, and other economic minerals. Coal of the common and brown varieties is the chief mineral product and is mined extensively, especially in Bohemia and Moravia. Iron deposits of special purity exist in Styria, Bohemia, and Carinthia, especially near Eisenerz in the first-named province, where there is a mountain of pure iron ore.

The foreign trade of the country is large, imports exceeding exports in value by about 30 per cent. Germany, Great Britain, and Italy are the greatest purchasers of Austro-Hungarian products, and these countries, together with the United States, are the largest exporters to the monarchy. The principal exports of Austria-Hungary are wood and manufactures of wood, sugar, eggs, lignite, cattle, horses, barley, glass and glassware, and malt.

CHARLES BRIDGE—ALTSTADT TOWER, PRAGUE

This old bridge is crossed annually by thousands of pilgrims attracted by the statue commemorating the martyrdom of St. John Nepomuc, the patron saint of Bavaria. Historically, interest centers about the Altstadt Tower on the right bank, the scene of two memorable battles—one with the Swedes in 1648, and one with the Prussians in 1744.

Historical. Austria-Hungary or the Austro-Hungarian Monarchy is a country within whose boundaries dwell a number of races which have never been blended into one, have no common language, and no common national feeling. These races, in the order of their numerical importance, are the Germans, Hungarians (Magyars), Bohemians, and related peoples, Poles, Rutheniens, Servians, and Croatians, Rumanians, Slavonians, and Italians.

The Archduchy of Austria is the nucleus around which the great and composite Austro-Hungarian Monarchy is historically centered. At the time of Charlemagne (about A. D. 800) the defense of the southeastern frontier of Germany against the Asiatic invaders resulted in the formation of a margravate, called the East Mark (hence, Oesterreich, or Austria), which was raised to a duchy in 1156. On the extinction of the ducal line in 1246 the Emperor Frederick II. conferred the duchies of Austria and Styria, with the province of Carinthia, on his sons Albert and Rudolf, thus establishing the Hapsburg dynasty. In 1457 the Austrian branch of the family became extinct and was succeeded by that of Styria, the crowns of Hungary and Bohemia passing for a time into other hands.

During the hundred years following, a series of intermarriages placed scions of the House of Hapsburg on the thrones of Spain and the Netherlands, while Germany and Hungary became subject to the imperial crown of Austria. In 1618 began the memorable conflict between Catholicism and Protestantism known as the Thirty Years' War. It originated in an insurrection of the Protestants of Bohemia, who had renounced their allegiance to Ferdinand and had chosen for their king the Elector Frederick V. Ferdinand called in the aid of Spain and other Catholic powers, and Frederick received the support of all Protestant princes except the Elector of Saxony. The defeat of Frederick near Prague in November, 1620, led to a war of extermination under Ferdinand against the Protestants of Bohemia and Moravia. The savage measures of the conqueror gave rise to a new revolt in which all of the Protestant powers ultimately joined, and the spirit of conflict, assuming new life, raged for twenty-eight years, which ultimately involved all Europe. The war was concluded by the Peace of Westphalia, October 24, 1648. In the meantime Ferdinand II. had died and had been succeeded by Ferdinand III. (1637–57).

In the succeeding cycle occurred the Hungarian revolt and siege of Vienna by the Turks, and the war of the Spanish succession concluded by the Peace of Utrecht in 1713. The male line of the Hapsburgs became extinct with the death of Charles VI in 1740, and his daughter Maria Theresa, wife of Francis Stephen, Duke of Lorraine, succeeded to the throne. In 1745 the husband of Maria Theresa was elected emperor under the title of Francis I. On the accession of Francis II. (1792) France declared war against the German Empire, and in conjunction with Russia the Emperor attempted to break the rising power of Napoleon, but was worsted in a series of conflicts that extended, with considerable interruptions, over a period of fifteen years. In 1806 Francis II. surrendered the ancestral title of Holy Roman Emperor and became the first Emperor of Austria.

In 1809 occurred the Peace of Vienna, succeeded in the following year by the marriage of Napoleon with Maria Louisa, Archduchess of Austria. In the events which led up to the first imprisonment and final downfall of Napoleon, Francis II. played a prominent part, for he soon recognized that the Corsican was a dangerous ally. At length, in 1815, occurred the battle of Waterloo and the Peace

Congress of Vienna. Francis II. died in 1835 and was succeeded by his son Ferdinand I., a weak-minded prince who willingly surrendered the bulk of his governmental functions to the Prime Minister, Prince Metternich. The outbreak of the third French Revolution in 1848 was soon followed by a similar uprising among the German States, especially Prussia and Austria. Ferdinand I., recognizing his incapacity to meet the exigencies of the times, abdicated on December 2, 1848, and was succeeded by his nephew, Francis Joseph I. The Hungarians declared themselves independent of the new Emperor and formed a republic; but after a series of battles they were again brought under the yoke (1849). Ten years later occurred the war with Sardinia and France in which Austria was speedily vanquished; by the definite Peace of Villafranca Lombardy was surrendered to the King of Sardinia. In 1867 the title of the empire was officially changed to the "Austro-Hungarian Monarchy." As a result of the Turkish War of 1877–78 the monarchy was intrusted with the administration of Bosnia and Herzegovina, but these provinces have never been formally annexed. Since that time the monarchy, while on the whole progressing financially, has been much distracted by internal dissensions.

THE FALLS OF THE KERKA, DALMATIA

Near Scardana, in Dalmatia, is a series of cascades known as the falls of the Kerka (Sardinski Slap). The main fall, descending in successive leaps, is 100 feet high.

Important Cities. The leading cities of the monarchy are Vienna, Budapest, Prague, Trieste, and Lemberg. Vienna, the capital and metropolis of the Austro-Hungarian Monarchy, is situated on the Danube River at the eastern extremity of the Wiener Wald Mountains, a prolongation of the Alps. To the east is a vast plain reaching to the Little Carpathians. The Inner Town, with narrow and tortuous streets, is the most ancient division of the city; in its center stands St. Stephens Cathedral, a masterpiece of medieval architecture. The Imperial Hofburg, an extensive rambling pile erected at various times, has been the residence of the Austrian princes since the 13th century; but the royal palace of Schönbrunn is situated in the suburb of Hietzing. The Vienna University, the largest in the monarchy, was founded in 1365. Besides being the most considerable city in population and in administrative importance, Vienna is the chief manufacturing center of the monarchy. Its manufactures include principally iron products (particularly engines), metal wares, furniture, clothing and other textiles, leather, jewelry, and musical instruments.

HALLSTÄTT ON HALLSTÄTTERSEE

On Hallstättersee, or the Lake of Hallstätt in Salzkammergut, one of the most beautiful regions of the Austrian Alps, lies the hamlet of Hallstätt, a picturesque Alpine village confined within extremely narrow limits between the mountains and the lake.

Budapest, the capital of Hungary, lies on both banks of the Danube about 130 miles southeast of Vienna. It was founded in 1873 by the union of the two towns, Buda and Pest, under a single municipal system. The section upon the right bank of the river lies mainly to the north of a hill called the Blocksberg, rising abruptly to a height of 394 feet above the level of the Danube. Hot springs, from which issue mineral waters much prized for medicinal qualities, are located at the base of the Blocksberg and elsewhere in the city and suburbs. The city has many important administrative and educational edifices, including the imposing royal palace erected by Maria Theresa in 1748. The beautiful Margaret Island (Margarethen-Insel) has been converted into a public park by the Archduke Joseph, its owner. The manufactures of Budapest are flour, tobacco, sugar, tannery products, chemicals, and machinery

OLD BRIDGE AT MOSTAR, HERZEGOVINA

Mostar, the principal town of the province of Herzegovina, lies in the narrow valley of the Narenta River. Connecting the two main streets on either bank are two bridges, one modern and one built probably by the Romans. The latter consists of a single arch of massive stone a hundred feet long.

Prague, the capital of the Province of Bohemia, is situated on both sides of the Moldau River and presents, with its castles and towers dating from the Middle Ages, a highly picturesque appearance. On the left bank of the river, beyond the district known as the Kleinseite, rises the Hradschin, crowned by the Imperial Palace, a long, rambling structure with portions dating from different periods of medieval and modern history. Other notable buildings are the Cathedral of St. Vitus, containing a mausoleum of the Bohemian kings and the regalia of the kingdom; the Palace of Wallenstein, and the Clementinum, an ancient Jesuit college. The chief manufactures are engines and railway cars; other important items are linen, cotton, leather, and gloves.

Trieste, the chief port of the monarchy, is situated on the east coast of the Adriatic Sea near its northern extremity. The city possesses large shipyards, has varied manufacturing industries, and an extensive trade with the leading commercial countries of the world. In 1719 Trieste was made a free port, but

PARLIAMENT HOUSE, BUDAPEST

Budapest, the capital of Hungary, was formed by the union in 1873 of the cities of Buda, on the right bank of the Danube, and Pest, on the left. In Pest is the Parliament House, a large Gothic building of sandstone, facing the river. It contains halls for both houses of the Hungarian Diet or Parliament, the House of Representatives, and the House of Magnates.

since 1891 only the harbor proper is outside of the customs limit. The principal structures of importance are the Exchange or Tergesteo, the Cathedral of San Giusto, and the Revoltella Palace. Lemberg, the capital of Galicia, is situated in Western Galicia on a small stream called the Peltew. The city is the great railway center of the eastern part of the monarchy and has a large commerce with Russia and Turkey.

Government and Education. The Austro-Hungarian Monarchy consists of two States, the Austrian Empire and the Hungarian Kingdom, ruled by a common sovereign under the so-called Compromise of 1867. The two States are independent of each other, possessing separate constitutions, legislative powers, and administrative departments for almost all branches of State affairs. The Crown is hereditary in the House of Hapsburg-Lorraine, passing by right of primogeniture and lineal succession to males, or on failure of males to females. The monarch must be a member of the Roman Catholic Church.

SCENE ON MARGARET'S ISLE, BUDAPEST

The ministries common to the two States are foreign affairs, military and naval affairs (exclusive of legislation concerning the army), and the common finances. The two States form practically one commercial territory, the system of coinage, of weights and measures, and all monopolies and taxes connected with industrial enterprises being the same in both. The common legislative power is exercised by the Parliaments of both States, but the voting of appropriations for common purposes and the supervision of the acts of common ministries are vested in the so-called Delegations. Of these there are two, each comprising sixty members; twenty are chosen from each of the Upper Houses and forty from each of the Lower Houses of the Parliaments, the members being appointed annually. The Delegations convene in alternate years at Vienna and Budapest.

For the administration of her separate government, Austria has a Reichsrath, or Parliament, which includes an Upper and a Lower House. Hungary has likewise its system of central government. There is also a special Provincial Diet for Croatia and Slavonia.

In Austria attendance at the elementary schools is compulsory between the sixth and fourteenth year. The gymnasia and Realschulen are secondary schools whose main function is to fit pupils for the universities and technological institutes. Of the eight universities maintained by the State two are located at Prague and the remainder at Vienna, Cracow, Czernowitz, Graz, Innsbruck, and Lemberg, respectively.

In Hungary public education comprises eight divisions—kindergartens, elementary schools, secondary schools, normal institutes, academies of law, establishments for religious education, universities, and schools of technology. School attendance is compulsory for children between the ages of six and twelve years. Each parish or commune containing thirty or more children of school age is required to have a school. The three universities maintained by the State are located at Budapest, Klausenburg (Kolozsvar), and Agram.

Liechtenstein. The Principality of Liechtenstein, the total area of which does not exceed sixty-five square miles, is situated between the Austrian provinces of Vorarlberg and Tirol on the east and the Swiss cantons of Grisons and St. Gall on the south and west. It is traversed by outliers of the Rhætian Alps and on the west lies within the valley of the Rhine River, which forms the western boundary. The climate is mild in the Rhine Valley, but among the mountain tracts is severe. The inhabitants of the principality are of the German race and Roman Catholic faith. The principal occupation of the people is agriculture. Cereals, flax, wine, fruit, and timber are produced. They pay no direct taxes and since the battle of Sadowa have not been liable to military service. The capital, Vaduz, is situated at the foot of the eminence on which rises Castle Hohenliechtenstein. The reigning family dates from the 12th century, tracing its descent from free barons who in 1608 became princes of Liechtenstein. Various small domains were added to or separated from their holdings from time to time, and in 1719, when the lordships of Vaduz and Schellenberg were united, the principality of Liechtenstein as now constituted came into existence. It formed part of the German Confederation until 1866, but from that date has been constitutionally independent, although its coinage, system of weights and measures, and customs and postal regulations are Austrian. The reigning Prince, John II., succeeded to the throne in 1858. Although, as already stated, the capital is located at Vaduz, State affairs are conducted chiefly at Vienna, where the Court of Chancellory holds its sessions; the Supreme Court of Appeal is at Innsbruck.

ISLE OF ADA-KALEH AND THE IRON GATES

In the Danube River, about four miles below the Defile of Kasan, renowned alike for its wild grandeur and for the roadway which the Emperor Trajan built along its cliffs, lies the island of Ada-Kaleh. Until 1870 the island belonged to Turkey, and is still inhabited by an interesting Turkish colony. A short distance below Ada-Kaleh, near Orsova, are the famous Iron Gates, the last great defile of the Danube.

SWITZERLAND

SWITZERLAND or the Swiss Confederation — physically the most mountainous country in Europe; politically a buffer State, with neutrality guaranteed, between France, Germany, Austria, and Italy; and historically the earliest of extant formal federations — has an area (15,976 square miles) less than one-half that of the State of Indiana, about one-third that of New York, and about one-tenth that of California. From east to west it extends 200 miles and from north to south 120 miles. It lies between 45° 50′ and 47° 48′ N. lat. and 5° 58′ and 10° 30′ E. long.

BERN, FROM THE RIVER AAR

Bern, the capital of Switzerland since 1848, occupies a commanding position on a peninsula of sandstone rock formed by the river Aar, which flows 100 feet below. "Bern" is the Swabian word for bear, and commemorates the killing of one of these animals by Duke Berthold V. of Zähringen, when he founded the town in 1191. For centuries a bear garden has been maintained by the city.

The boundaries of Switzerland follow natural lines of demarcation to some extent. The Jura Mountains form the frontier toward France, but on the side toward Italy the canton of Ticino lies beyond the main crest of the Alps Mountains, which elsewhere constitute the boundary. On the north and northwest the Lake of Constance (Boden-See) and the Rhine and Doubs rivers give the frontier its general direction, although not its exact limits.

The geological structure of Switzerland, broadly speaking, is comprised in four great zones, extending across the country from southwest to northeast. On the northwest is the limestone zone of the Jura Range with a mean altitude of about 2,500 feet. The second zone is the Swiss Plateau, extending between the Lake of Geneva and the Lake of Constance, which rises to altitudes ranging from 1,000 to 3,000 feet. It is composed largely of sandstone, in part overlaid with glacial deposits. The Alps Mountains, which comprise about three-fourths of the area of Switzerland, constitute the third and fourth zones.

Glaciers and Mountains. Switzerland in its physical configuration is an alternation of elevations and depressions, all on a gigantic scale. Two great river valleys traverse the land from east to west. Between these valleys are mountains, cut by the great valley of the Aar River and the smaller valley of the Thur River, and around them are the vast mountain ranges that wall in the Confederation. Cutting through the mountains in eleven of the twenty-two cantons are large rivers of ice, the glaciers. One twenty-third of the area of Switzerland is covered with snow and ice. There are 471 glaciers, 138 of which are more than 4¾ miles in length. The longest glacier in the Alps is the Gross Aletsch in the Bernese Oberland; it is fifteen miles long with a maximum breadth of 1,968 yards and a basin practically fifty square miles in area.

OLD CITY GATE, BASEL

Basel on the Rhine was founded in the 4th century, but destroyed and rebuilt in the 10th. This old gate, the Spalen-Thor, is one of the few remaining traces of the old city walls.

Small as is Switzerland, four great river-basins receive its drainage. The Rhine and Rhone rivers drain by far the greater part of the country. The waters of the eastern mountain slopes reach the Danube River by way of the Inn, and the watersheds of the southern frontiers feed the tributaries of the Po River. The Rhine system of streams and lakes drains nearly three-fourths of the area, the Aar River, the largest affluent of the Rhine, receiving the drainage of the Lake of Neuchâtel in the west and that of Lakes Zürich and Luzern in the east. All of the picturesque lakes inclosed within the Swiss Alps, except the Lake of Geneva, are comprised in the Rhine system.

The Central Alps are the principal mountains of Switzerland, and the most massive of all the ranges of the Alpine system are within the borders of the Confederation. The chain of the Jura, also, for the most part, is comprised within the Western Swiss frontier. Mont Blanc, the highest of European peaks, with an altitude of 15,781 feet, is just outside of Switzerland in the French province of Savoy; but within the limits of the Confederation are a greater number of mountains approaching that altitude than in any other country of the Continent. Monte Rosa, on the Italian frontier, attains a height of 15,215 feet, while Mount Finsteraarhorn exceeds 14,020 feet, and the Eiger, Mönch, and Jungfrau rise to more than 13,000 feet.

Lakes, mountains, passes, glaciers, and waterfalls are scenic features that make Switzerland unique. The loftiest of the Swiss cataracts is Staubbach (1,001 feet in height). The picturesque Falls of the Rhine at Schaffhausen have an immense volume of water and are used for industrial purposes.

Climate and Resources. The climate of Switzerland is as varied as its scenery, depending chiefly upon variations in altitude, which range between 646 feet for the Lago Maggiore and 15,215

feet for Monte Rosa. While the northern mountain slopes never receive direct sunshine, the southern slopes receive the solar rays as perpendicularly as does a tropical plain. On the plateau the average January temperature varies from 26° to 32°, according to elevation; the average July temperature, from 62° to 68°.

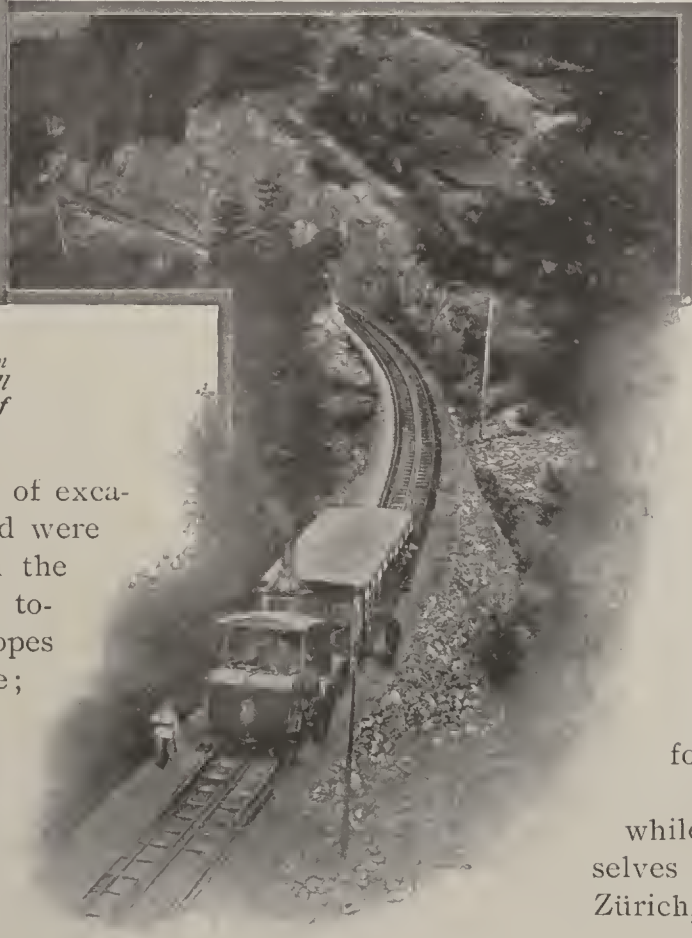
Nearly 200 of the 800 species of plants belonging to the Alps occur nowhere else. Fully 150 species are indigenous not only to the uplands of the Alpine system but also to the Arctic regions. Above 4,000 feet the forests are composed of Rolle pine, larches, and firs; under that limit the beech predominates, while in the valleys the oak and chestnut are abundant.

Wild animals in the Alps are becoming rare. A few roebuck are still found and occasionally chamois in the mountain belt extending eastward from Freiburg (Fribourg). Only the minor animals, the Alpine hare and the marmot, are found in large numbers. The grouse, partridge, snipe, and wild duck are the principal game-birds.

Agriculture, horticulture, viticulture, stock-raising, and manufacturing are the principal industries of the country. Iron ore is worked in various places; salt is obtained near Bex; and asphaltum and sulphur are found. During the progress of excavations for the Simplon tunnel traces of gold were discovered, but not in paying quantities. In the lowlands wheat, oats, barley, flax, hemp, and tobacco are produced; the dwellers on the slopes are extensive cultivators of the vine and olive; and in the highlands are the herdsmen, dairying and cattle-breeding being almost the sole occupations of the people in this portion of the country. Among the manufactures are watches and clocks, laces, textiles, leather goods, wood-carvings, and pottery.

GIESSBACH FALLS, SWITZERLAND

The falls of the Giessbach consist of seven cascades, falling from rock to rock, and framed in dark green foliage. The total fall from the source of the stream on the Schwarzhorn to the Lake of Brienz is 980 feet.



RAILWAY ON MOUNT RIGI

The highest peak of Mount Rigi is 5,902 feet above the sea, and to this point a cog-wheel railway, from Vitznau, on Lake Lucerne, has been built. The view comprises an area of 300 square miles.

Historical. In the prehistoric remains found in Switzerland are evidences of the existence of a race that possessed the land centuries before Julius Cæsar effected his hard-won conquest of the Helvetii. These early people were the Lake-Dwellers. The Helvetii, however, are the earliest inhabitants known to history. Under Roman rule this Celtic race occupied the land until the time of the great migrations from the North, when the Alamanni seized the country to the north and east, the Burgundians that to the west, and the Ostrogoths that to the south. In the 5th century A. D. Helvetia came under the rule of the Franks, but the Teuton Alamanni finally won in the struggle for supremacy. Four-sevenths of the present population speak a Germanic tongue known as Swiss-German, while the remainder are divided between Italian and French speaking people, with a small number (a little more than 1 per cent) who cling to the old language of their ancestors, the Rhæto-Romanic, a neo-Latin tongue spoken in the Grisons and the Tirol.

TELL'S CHAPEL, LAKE OF URI

On the eastern shore of the Lake of Uri on a little wooded promontory, "Tells platte," stands Tell's Chapel, built, it is said, in the 14th century by the people of the canton to mark the spot where the Swiss liberator sprang out of Gessler's boat.

Christianity obtained its foothold in Helvetia through the Irish missionaries who followed the invasion of the Franks. Three centuries later the Holy Roman Empire held sway, and on the defeat of the Emperor Lothair at Fontenay in 841, Louis the German came into possession of the region between the Alps and the Rhine River. This tract, twelve years later, King Louis made a fief of the Church, but this condition was abolished four centuries afterward, on the protest of the free tenants of the canton of Uri, who saw their liberties threatened by the Hapsburgs.

In Schwiz (Schwytz) and Unterwalden, which, with Uri, the third of the Forest Cantons, formed the nucleus of what is now the Swiss Confederation, occurred the same struggle against Hapsburgian domination, but the contest was the fiercer as the aggressors here were more firmly intrenched in their rights or claims. In 1248 the men of Schwiz, Sarnen, and Luzern were threatened by the Pope with excommunication if they persisted in defying the Hapsburgs. In 1291 the three cantons joined in the Everlasting League. The rights of the cantons were broadened until the Hapsburgs took alarm at the independence and high spirit of the Swiss. The Emperor Frederick declared the three valleys his and moved his army on Schwiz and Unterwalden. The Austrian defeat of Morgarten followed in 1315 and the League was renewed. To this period are assigned the legendary exploits of Wilhelm Tell, the liberator, and the founding of the Confederation at Rütli.

Alternate peace and strife continued, and meanwhile the Forest Cantons had strengthened themselves for resistance by the admission of Luzern, Zürich, Glarus, Zug, and Bern. Luzern fretted under Austrian rule. The Emperor Leopold undertook to punish the rebellious Cantons, but was defeated at Sempach in 1386. This was the beginning of the end of Austrian domination,

from which the Swiss were practically emancipated in 1449 and made formally independent in 1648.

The valleys that were the birthplace of federalism afforded battle-fields, contemporaneously, for a spiritual revolution. In the struggle that ended in the declaration by many of the Swiss people of their independence of the Pope of Rome, Huldreich Zwingli was the leader and Zürich was the scene of the conflict. The reformation Zwingli preached became political. He sought to enlarge the influence of Zürich and Bern in the councils of the Confederation and to effect an alliance with the Protestants of Germany. Quarrels resulted; the Catholic members of the League advanced on Zürich, and near Kappel in 1531 the defending army was defeated and Zwingli was slain.

GENEVA

Geneva is situated at the southwest end of Lake Geneva, at the outlet of the Rhone. The island shown above is known as Rousseau's Isle. On it is a fine statue of the poet, who was a native of Geneva.

The defeat and the treaty that followed established on a firm foundation the principle of religious liberty. At the same time the League was permanently split into two opposing factions, one Catholic, the other Protestant. Toward the middle of the 16th century John Calvin attained his greatest influence, setting up in Geneva a theocratic government that ruled with a high hand. By the time of his death, however, in 1564, a reaction had begun which resulted in what is known as the Counter Reformation, when the Catholics strove to convert the Confederation to their faith, just as the Protestants had done before them.

THE CASTLE OF CHILLON

The Castle of Chillon, on the shore of Lake Geneva, in its present form dates from the 13th century. While in reality the dungeon of the patriot Bonivard, the victim of the Dukes of Savoy, its fame rests largely upon Byron's poem of a fictitious character, "The Prisoner of Chillon."

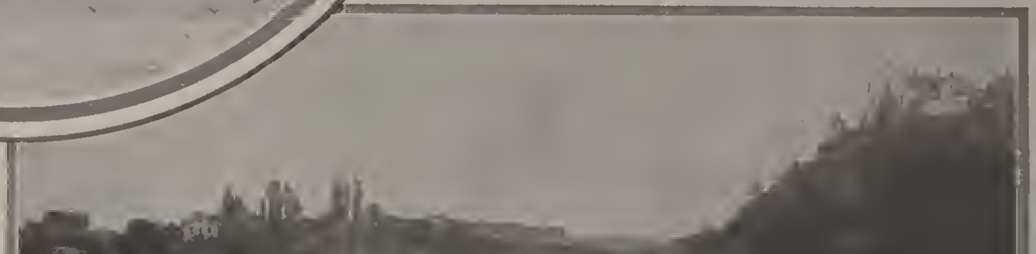
In 1798, under the influence of France, the Helvetic Republic was established, this innovation constituting an attempt to reorganize the Confederation as a centralized State. The Forest Cantons rose in revolt, but were suppressed. In 1803 Napoleon compelled the adoption of the so-called Act of Mediation, restoring the Confederation. With the waning of the Napoleonic power the integrity of the Confederation was endangered. On the invitation of the reactionary party Austrian and Russian troops crossed the frontier, and the powers were induced to take the affairs of the cantons in hand. In 1815 Austria, Great Britain, Portugal, Prussia, and Russia, in the Congress of Vienna, guaranteed the perpetual neutrality of Switzerland. The twenty-two cantons then composing the Confederation are its present sovereign constituents.

Cities. Zürich, at the northern end of the Lake of Zürich, and divided by the waters of the picturesque Limmat, is remarkable for the beauty of its situation and attracts many visitors. Although a place of great antiquity, Zürich has attained an important position as a commercial and manufacturing center only since 1870. It is now the most prosperous, as well as the most populous city of Switzerland. Textiles, largely silks, are its chief manufactures. For centuries the schools of Zürich have been famous, and the modern university founded in 1832, and the polytechnic institute established in 1861, bid fair to keep up their reputation. Zürich was the birthplace of Pestalozzi, the celebrated educator.

Basel, the gate to Switzerland on the Rhine as Geneva is on the Rhone, ranks second in importance. Art and literature have made Basel famous, and it is the seat of a university founded in 1640. Of late years it has become a great industrial center, being one of the chief seats in Europe of the manufacture of silk ribbons, and having also manufactures of yarns, machinery, chemical products, etc. At least 96 per cent of its inhabitants are Germans.

Geneva, third in size of the Swiss cities, is one of the most interesting. It has a wide fame as a center of the watchmaking industry, although in reality the Canton of Neuchatel manufactures most of the so-called Geneva watches. Geneva long has been renowned as a religious, educational, and scientific center, and few cities of its size can claim so long a list of names eminent in science and theology. Among them that of Calvin, who introduced the Reformation here in 1535, is still perpetuated in Calvin's University Academy, while Bonivard's monument is the Public Library, and Rousseau, although an exile, is now honored as the greatest of Genevese. John Knox, the Scottish reformer, was long a resident here.

Bern, the capital of the Confederation, has the distinction of being one of the best built cities of Europe. Among the chief modern structures is the Federal Palace, the building of the Swiss Legislature. The city is the seat of a university with a natural history museum and an observatory. In many respects Bern retains more medieval characteristics than any other large town in Switzerland; in the principal streets of the older part of the town the houses rest on arcades, which form a covered way for pedestrians. The town hall, in the Florentine style, dates from the Middle Ages, and the Gothic Cathedral was begun in 1421. The numerous fountains date mostly from the 16th century. Haller, the distinguished physiologist, was a native of Bern.



THE FALLS OF THE RHINE, NEAR SCHAFFHAUSEN

These cascades, known also as the Laufen, are among the most picturesque in Europe. The height varies from sixty feet on the left bank to fifty on the right. In the center is a rocky little island, from which can be obtained an impressive view of the seething waters below.

OBERHOFEN AND LAKE THUN

Oberhofen, on the northeast bank of Lake Thun, is much visited by tourists making the circuit of the lake by steamer. The surroundings are beautiful, with a distant view of Eiger and Mönch and the Jungfrau. On the lake shore is a picturesque chateau several centuries old.

VIEW IN THE UPPER ENGADINE

The Engadine is the valley of the river Inn. It has an altitude of from 3,500 to 6,000 feet above sea level, and is walled about by the rocky, snow-covered heights of the Rhætian Alps. The valley is about sixty miles long with an average width of from one to two miles.

Lucerne, upon the Lake of Lucerne, with Mount Pilatus, the Rigi, and other Alpine peaks rising above it, is renowned for the beauty of its situation, and is a much frequented resort of tourists. Among other attractions are its watch towers, erected in 1385, its covered bridges adorned with ancient paintings, and its quaint and picturesque houses of the 16th and 17th centuries. Here also is the famous Lion which Thorwaldsen designed in commemoration of the Swiss Guard who fell defending the Tuileries, August 10, 1792.

Government and Education. The fundamental independence of the cantons is recognized in the constitution now in force, and in the cantonal governments the sovereignty of the people is the ruling principle. In the small cantons of Appenzell, Glarus, Unterwalden, and Uri, all the electors assemble in the open air, forming what are known as the Landsgemeinden, for the purpose of legislation on cantonal affairs. In the larger cantons, on the other hand, a body chosen by universal suffrage, known as the Grosse Rath or Great Council, exercises the functions of the Landsgemeinden.

The first magistrates of Switzerland are the President of the Confederation and the Vice-President of the Federal Council or Bundesrath, each elected for the term of one year by the Federal Assembly or Bundes-Versammlung in joint session.

The Federal Assembly consists of two chambers, the Ständerath or State Council, corresponding to the United States Senate, and the Nationalrath or National Council, corresponding to the House of Representatives. Forty-four members, two for each canton, compose the State Council. The National Council consists of representatives chosen by direct election. The Federal Assembly is the supreme legislative and executive authority. Its executive functions, however, it deputes to the Federal Council, consisting of seven members elected for three years. It is only through the Federal Council that legislative measures may be introduced in the chambers of the Federal Assembly, but its members have no vote on the measures they introduce. The Federal Assembly has been empowered by the cantons to deal with matters of peace, war, and treaties, also to deal with railways, posts, telegraphs, coinage, the tariff, etc.

By the application of two political principles, the referendum and the popular initiative, the people of Switzerland largely have retained in their own hands the making and the modification of laws. Every amendment to the Constitution must be submitted to direct popular vote. Moreover, the people may exercise their initiative, the demand of 50,000 qualified electors being sufficient to cause the submission of an amendment to popular vote. The people, in like manner, may take the initiative in legislation, and the demand of 30,000 electors compels the reference of any law to the approval or veto of the people. The maintenance of a standing army is constitutionally forbidden, but every male citizen, able and of military age, is liable for service.

Primary schools throughout Switzerland are free, but the educational administration is not centralized. Education is nominally compulsory. There are six universities in the Confederation.

The Alpine Tunnels. Despite the obstacles Nature opposes to the establishment of communication between Switzerland and its neighbors, engineering skill has addressed itself from the earliest Roman times to the commercial conquest of the Alps. The Brenner was the pass earliest in use and likewise the first (1867) over which a railway was built. For the construction of the line twenty-seven tunnels and sixty large bridges were required.

The boring of the great tunnels designed to make the passes of St. Gothard and Simplon commercially practicable routes are the latest and the most ambitious of engineering works in the Alps. The carriage road over the St. Gothard Pass was constructed during the years 1822–30. In 1882 the boring of a 9½-mile tunnel under 6,935 feet of mountain completed the Alpine railway route from Italy through Switzerland to Germany. The Simplon Pass since Roman times has been the avenue for Milan's trade with the Rhone Valley, and along the same route run the trains of the Jura-Simplon railway system; but on the Swiss side of the frontier rocks compel a long detour. Switzerland and Italy have jointly undertaken the construction of a tunnel. In November, 1898, the boring began on both sides at once, from points 12¼ miles apart. The work is to be completed in 1904.

Besides these more difficult engineering works, railway lines cross the Jura Mountains in five places, many cog-wheel and cable lines carry tourists to Alpine heights, and an underground railway to the summit of the Jungfrau is in course of construction.

SWISS HOUSE, NEAR INTERLAKEN

The district of Interlaken lies between Lake Thun and Lake Brienz, on the borders of the Oberland. The distinctive features of Swiss architecture, the low spreading eaves and the long balconies projecting from each floor, are shown plainly in the picture.

ITALY

THE KINGDOM OF ITALY consists mainly of a peninsula lying between 46° 40′ and 37° 55′ N. lat. and 6° 35′ and 18° 35′ E. long., bounded on the northwest, north, and northeast by the Alpine frontiers of France, Switzerland, Germany, and Austria, and on all other sides by the Mediterranean Sea. From the Gulf of Genoa southward extends a submarine platform which emerges, between 43° and 38° 50′ N. lat., in the islands of Corsica and Sardinia, once joined by an isthmus that is now represented by an island group in the Strait of Bonifacio. The area of Italy, including that of Sicily (9,936 square miles) and Sardinia (9,294 square miles), is 110,623 square miles. The kingdom is divided into sixty-nine provinces. The extreme length of the peninsula is 718 miles; its greatest width, 340 miles.

VICTOR EMANUEL III.

The present King of Italy succeeded to the throne on the assassination of his father, King Humbert I., July 29, 1900. He is the third King of the united Italy formed by his grandfather, Victor Emanuel II., and the great statesman, Count Cavour.

The Coast-line. The Italian coast, more than 4,000 miles long, appears exceedingly irregular by comparison with the coasts of Spain and Portugal. On the western coast, especially, natural harbors are abundant and afford excellent shelter to shipping. There are only a few adjacent islands on the east, but on the west are the Lipari and Egadi (Ægades) groups, off the coast of Sicily; Capri, Ischia, and the islands of Ponza, off Campania; while the Tuscan Archipelago guards the northern entrance to the Tyrrhenian Sea. The largest island of this archipelago, famous as the temporary place of exile of Napoleon, is Elba, which lies about fifty miles south of Leghorn and only six miles from the mainland at Piombino.

As to configuration and geology Italy falls into three main divisions: (1) The Alpine region in the north; (2) the Lombardo-Venetian lowland plain, which includes the valley of the Po River and which is bounded on the north and south, respectively, by the Alps and Apennine ranges and on the west and east by the Alps Mountains and the Adriatic Sea; and (3), the largest of the three divisions, the peninsula proper. That volcanic forces are not yet extinct in Northern Italy is proved by the hot springs found near Padua and Vicenza; by occasional earthquakes; and by the gas springs and mud volcanoes on the northern slope of the Apennines.

THE CAPITOLINE HILL AND THE TIBER

The Capitoline Hill (Il Monte Capitolino), one of the seven hills on which ancient Rome was built, overlooks the river Tiber. On the hill there are now three palaces—the Palace of the Senate, the Palace of the Conservators, and the Nuissum of the Capitol—magnificent buildings which contain objects of the greatest artistic and historical interest.

Like the two other great peninsulas of Southern Europe between which it occupies an intermediate position, Italy is highly mountainous. It is, like Spain, separated from the remainder of Europe by a rugged mountain barrier, a feature which the Balkan countries lack; but as distinguished from the ranges of the Iberian Peninsula, the mountains of Italy are so disposed that the moisture-bearing winds, instead of being deprived of their moisture at the coast, retain it for precipitation in the interior.

Ranges and Peaks. The mountain barrier between Italy and its northern neighbors is formed by the southerly ranges of the Alpine system. The ascent from the south is precipitous; from the north by a gentle slope. Continuous with the Maritime Alps is the most northerly chain of the Apennine Mountains, with its trend from west to east. This chain, composed of the Ligurian and Etruscan Apennines, is a coast range extending through Liguria and forming the principal boundary between the provinces of Emilia and Tuscany. In Tuscany the direction of the range changes toward the southeast, and throughout the peninsula proper the Apennines are the dominant physical feature. In the extreme southeast only the foothills appear. From the southwestern extremity of the peninsula they continue into Sicily, forming a coast range along the northern shore of the island with a spur to the south.

Most of the notable peaks of the Alps lie north of the Italian frontier; the highest mountains south of that boundary are the Gran Paradiso (13,320 feet) in the Graian Alps and Monte Viso (12,605 feet), southwest of Turin, the summit of the Cottian Alps. The dolomitic limestone mountains on the frontiers of Venetia and the Tirol are so delicately tinted with pink and other colors that they have been considered of coralline origin. Mont Blanc and Monte Rosa are on the western frontier. The roads that traverse the valleys of Italy up to the important passes of the Alps, Mont Cenis, Simplon, St. Gothard, and Brenner, wend their way through a region of scenic grandeur. These valleys and the lakes that occupy a number of them are of glacial origin, and glaciers still impart to the Gran Paradiso, in large measure, its impressive picturesqueness. The pass immediately west of Savona, usually considered as marking the division between the Alps and the Apennine mountains, is about 1,600 feet above sea-level. The Ligurian coast range extends in a grand arc almost semicircular, about the Gulf of Genoa, the western shore of which is known as the Riviera di Ponente, or "shore of the setting sun," the eastern shore being termed the Riviera di Levante. Leaving the

VIEW AT CARPINETO, ITALY

Carpineto is a small town in the Volscian Mountains, about fourteen miles from Segni. It has several old Gothic churches and is notable as the birthplace of Pope Leo XIII.

western coast, the Apennines curve across the neck of the peninsula, and become a coast range on the Adriatic Sea. The highest altitude of the range is northeast of Rome, where the Gran Sasso d' Italia has its summit in Monte Corno (9,580 feet). Northeast of the mountains lie the tablelands of Apulia, flanked by alluvial lowlands in the extreme southeast. The remainder of Southern Italy and the Island of Sicily are chiefly mountainous.

The Lowlands. The work of alluvial deposition, begun in prehistoric ages, still continues. How great are the changes that may be wrought in long periods of time may be judged from the fact that during 700 years the shore of the Lago Maggiore has receded nearly a mile from the village of Gordola. A depression of sea-level undoubtedly formed the plain through the center of which the Po River flows to the Adriatic Sea; this being followed with a gradual filling of the depression by the silt carried down in Alpine and Apennine rivers and an upheaval of the alluvial lands thus built up. These lowlands have an estimated area of 16,450 square miles, divided by low volcanic hills at Vicenza and Padua into the larger Lombardian Plain on the west and the smaller Venetian Plain on the east. The Adriatic coast of the lowlands is in a state of constant change, except where the hand of man has been at work to hold the sea in subjection. The lagoons along the coast are also of alluvial formation, and if left to the undisturbed forces of nature would be blotted out by the same process that formed them. Ravenna, which formerly occupied a site similar to that of the Venice of to-day, is now six miles from the sea. Alluvial deposition is gradually filling up the small lagoons into which the great lagoon of Comacchio has been divided by the agency of the rivers that discharge into that basin. Furthermore, by a system of irrigation in practice for ages, the alluvium brought down from the mountains by small streams is applied through canals to the enrichment of the fields.

VIEW OF THE CASCADES, TIVOLI, ITALY

The cascades of the Teverone (Anio) River, known as "Le Cascatelle," are west of the city of Tivoli and a mile from the more famous "Fall of the Anio." Tivoli has many antiquities: among them a temple of Vesta and "Hadrian's Villa," a beautiful palace built by the Emperor Hadrian.

Lakes and Rivers. The lakes of Italy form one of the most notable scenic features of the country, yet they have an importance quite independent of the beauty that attracts tourists to their shores. They serve as reservoirs regulating the flow of the mountain torrents that swell the volume of the Po River; they also modify the climate and afford routes for inland commerce. The largest are the Lago di Garda, 215 feet above sea-level and 141 square miles in area; the Lago Maggiore, with an altitude of 635 feet and an area of about eighty-three square miles; the Lago di Como, altitude 700 feet, area a little less than sixty square miles; the Lago d'Iseo, altitude 605 feet, estimated area about twenty-three square miles; and the Lago di Lugano, altitude 890 feet, area nineteen square miles.

The Po River has as its source a mountain torrent, fed by the snows of Monte Viso and by several streams

CORNETO

Corneto, on the Marta River, three miles from the Mediterranean, is built largely from the ruins of the ancient Roman city of Tarquinii. The church of San Francisco crowns the hill.

SAN BENEDETTO MONASTERY AT SUBIACO

Near Subiaco in the Sabine Mountains are some of the most ancient monastic buildings in Europe. Among these is picturesque San Benedetto which was founded by St. Benedict himself in the 6th century. The name of St. Francis of Assisi is also connected with the Monastery, from a visit which he made to it in 1216.

having their origin in the glaciers of the Alps. It first becomes navigable at Turin, where it receives the Dora Riparia River, and from its confluence with the Ticino River near Pavia, it winds sluggishly through the plain. In its course of 416 miles it drains a basin 26,799 square miles in area, and annually carries to the Adriatic Sea a volume of alluvium estimated at 1,623 million cubic feet. The river is subject to inundation, and midway in its course, at Cremona, there begin a series of dikes whereby the waters of the stream are controlled. This system of diking, which is of great antiquity, protects 3,000,000 acres of fertile land. The waters of the Po River reach the Adriatic Sea by way of a delta crossed by numerous branches, at which point the land is rapidly encroaching on the sea.

The Tiber River, with a navigable length of sixty miles, a total length of 260 miles, and a drainage basin having an area of 6,475 square miles, comes next to the Po River in

BRACCIO NUOVO, THE VATICAN, ROME

This hall, extending across the southern end of the Vatican, was built by Pius VII. in 1821, for the housing of ancient sculptures.

ST. PETER'S, ROME

As early as 800 A. D., when Charlemagne was crowned in it, the church of St. Peter was famed throughout Christendom. The present building, with many alterations, due to the successive masters who for nearly two hundred years superintended its construction, owes its crowning glory to Michelangelo, who designed the matchless dome.

point of size. It is even a more troublesome stream by reason of its sudden floods and of the volume of alluvium that it carries down from the Apennines. Its most important tributary is the Nera River, fed from the south by the Velino, a river famous for the beautiful Cascades of Marmora, one of which plunges in a single sheet over a precipice 550 feet in height. Another important affluent north of Rome is the Teverone River, whose waterfalls are the scenic feature for which Tivoli is noted. Below Rome the Tiber River reaches the Mediterranean Sea by way of a delta. Ostia, now five miles inland, was the seaport of Rome in the early days of the republic, but the former harbor is now filled with silt. A bar now closes the mouth of the Tiber River and the land is encroaching on the sea at the rate of ten feet a year.

The Adige, the third river in size of Italy, rises in the Rhætian Alps. It flows east, then south, then southeast into the Adriatic Sea. East of Mantua it runs parallel to the Po River. This stream, which has a length of 246 miles and a drainage area of 8,648 square miles, is also restrained by embankments. The Arno River, the fourth in size, rises in the Apennines, flows southward, then to the northwest, and after receiving the Sieve, flows westward to the Mediterranean. Like the other Italian rivers, it is subject to terrible inundations.

Swamps and Marshes. The Valle di Chiana, which connects the basins of the Arno and Tiber rivers, was formerly a region of stagnant swamps, a veritable breeding place for fever. About the middle of the 18th century the work of reclamation was begun, whereby the torrents were controlled and made to deposit their alluvium where it would fill up swamps or increase fertility. The district is now one of the most salubrious in Italy. The marshy littoral tract lying between Piombino and Orbetello seems to have been drained by a system of subterranean canals in the time of the Etruscans, but is now one of the most deadly malarial districts in the kingdom. On engineering works for the reclamation of the northern coast of Tuscany, however, vast sums of money have been expended in modern times with considerable success.

North of the mouth of the Tiber River as far as Cività Vecchia and south as far as Terracina extends La Maremma or the Roman Salt Marsh, the malarial Campagna. The stretch of lowland between Porto d'Anzio and Terracina is known as the Pontine Marshes, the desolate tomb of no less than twenty-three flourishing cities of antiquity. Owing to these pestilential marshes, Rome is deprived of the enjoyment of its natural suburban district and productive adjacent inland districts, for agriculture and grazing within 325 feet of sea-level are

GREAT HALL OF THE LIBRARY, THE VATICAN, ROME

The Vatican is no less renowned because of its Library and Art Galleries than because it is the Papal Palace. The present library building, with its magnificent hall and rooms for books and manuscripts, dates from the time of Sextus V. It contains over twenty-six thousand manuscripts, some of which are two thousand years old.

attended with grave peril to life. East of Rome, half-way across the peninsula, the marshy Lago di Fucino has been rendered productive and salubrious by the restoration of a drainage tunnel excavated by the Emperor Claudius.

Volcanoes. Along the western margin of the Southern Apennines begins the great volcanic system of Italy, partly continental, and partly insular. On the Continent there are twenty volcanic craters, all of which, however, except Mount Vesuvius (4,100 feet), which is still active, have been dormant in recent times. The most destructive eruption of Vesuvius occurred A. D. 79, when Herculaneum and Pompeii were buried in ashes and volcanic mud. Since then the mountain has had a number of eruptions; none, however, causing very great destruction. The mainland region surrounding the volcanic district is also subject to violent earthquake shocks. A short distance southeast of Rome are the volcanoes of Latium, the Albano group, now extinct, which in ancient times projected their lava to the very gates of the eternal city. In the deposits of these volcanoes the Roman Catacombs were excavated.

NAPLES, ITALY

Naples, the largest city of Italy, is built in the form of a crescent along the hills on the north shore of the Bay of Naples. The beauty of the city as seen from the sea is famed throughout the world. To the east of the bay is the volcano of Mount Vesuvius.

Sicily and Sardinia. The island of Sicily is separated from the mainland by the Strait of Messina. The dominant feature of Sicilian topography is Mount Etna, which rises by a gentle slope to an altitude of 10,865 feet. At irregular intervals during the past 2,000 years this volcano has had more than 100 eruptions. In the southern part of Sicily, near Girgenti, is a series of small mud volcanoes. Between this point and the island of Pantelleria is the submarine volcano of Ferdinandea, which at long intervals has been known to appear above the surface of the sea. Geological dependencies of Sicily are the Lipari Isles, a volcanic group of seven islands and a few islets. Of these Lipari is the largest and Vulcano and Stromboli (3,090 feet) contain the only active peaks. Sicily contains a number of small rivers of the nature of mountain torrents. The Achates has given its name to the precious stone, the agate, found in several of the river-beds in the island. The climate of Sicily is warm but generally salubrious. The rainfall in winter is very heavy. The soil is so very fertile that little labor is required to raise abundant crops of fruit, grain, cotton, etc.

HARBOR OF ISCHIA—BAY OF NAPLES

Ischia, an island of volcanic formation at the entrance of the Bay of Naples, has an area of about twenty-six square miles. The harbor was originally a lake, but in 1853-56 a channel was cut, connecting it with the sea. Ischia contains several volcanoes and is famous for its mineral springs, its fine fruits, and its delightful climate.

Of Sardinia, nine-tenths of the area is mountainous; its summit is Mount Gennargentu (6,365 feet). Sardinia, although but slightly smaller than Sicily, has less than one-fourth of the population of the latter, for so ill-drained is its surface and so active the scourge of malaria that the inhabitants can not properly develop either the mineral or the agricultural resources of the country, which was once the granary of Rome.

ISLAND OF CAPRI, OFF NAPLES

The small, rocky island of Capri is situated in the Bay of Naples. It is noted in history as the place where the Emperor Tiberius spent the last ten years of his life, and remains of several of the villas built by him are still to be seen. Famed for its bold picturesque scenery the island long has been a favorite resort of artists and tourists.

Climate. The climate of Italy, except in portions of the northern provinces, is remarkably equable. The Po River basin is subject to the greatest extremes of heat and cold, but even there, save in Piedmont, the thermometer never falls below 35° in winter, while the mean summer temperature does not exceed 80° anywhere in Italy. In the lee of the Alpine shelter from cold north winds the climate is perceptibly milder than a little farther to the south, where the wind again has practically a full sweep. Thus, while the mean annual temperature of Milan is 55.4°, with a minimum of about 35° in winter, the corresponding temperatures on the Lago di Como are fully four degrees higher. The mean annual temperature at Rome is 59°; at Palermo, Sicily, 62.5°; and in Sardinia, 60.5°. The highest temperature at Rome does not exceed 95°, while in Sicily the maximum is between 97° and 104°. Though the climate and healthfulness of the Ligurian Riviera towns are by no means uniform, some of them are among the most popular health resorts of Europe.

The average rainfall of Italy is about forty inches in the north, thirty-two inches in the central portion of the peninsula, and not more than twenty-seven inches in the south. The rainfall is heaviest in the winter, and the rivers, except such as are fed by springs from the limestone regions, are in flood during that part of the year and little larger than rivulets in summer.

Agriculture in Southern Italy, Malta, and Sicily suffers from the scourge of the sirocco, a dry wind supposed to have its origin in the Sahara Desert in Africa. The temperature of this scorching wind occasionally reaches 95°, even at midnight; if it continues, as it sometimes does, for three days, it may strip the vineyards and olive orchards of their foliage and ruin a season's crop. The mistral, a

northwest wind that blows on the Mediterranean coasts from the mouth of the Ebro River in Spain to the Gulf of Genoa, is injurious to vegetation by reason of its iciness; but inasmuch as it purifies the air where it prevails, its influence on health is not wholly noxious.

Resources and Industries. The resources of Italy fall mainly under four heads, namely, of the soil, forest, mine, and fisheries. The country largely is agricultural. Only an insignificant proportion of the population is devoted to forestry, mining, and fishing. The methods usually pursued in agriculture are unscientific. The irrigated plains of the Po River basin have extensive fields of rice, and maize also is an important crop in the northern provinces. Viticulture engages a large number of the inhabitants, and Italy stands second among wine-producing countries in its output. The wines of Marsala in Sicily, of Chianti in Upper Tuscany, and of Asti in Piedmont are of excellent quality. The wine industry is followed chiefly in the south; so also is olive culture, and the oil of Lucca on the Gulf of Genoa is of exceptional quality. Oranges, almonds, figs, and other fruits, besides wheat and wool, are the principal products of the southern provinces. Silkworms, raised in Northern Italy, provide the principal export of the kingdom.

MONASTERY OF SAN MARTINO, NAPLES

The Carthusian Monastery of San Martino, now suppressed, is extremely interesting for the objects of art and historic significance which it contains.

Italy possesses the flora characteristic of Central Europe, among which are many useful woods. It is estimated that about one-seventh of the area of the kingdom is still under timber notwithstanding the improvident deforestation of the Apennine Mountains, which continued for centuries. Charcoal-burning is a common occupation among the mountain dwellers, but the cutting of timber is now carried on under rigid governmental supervision.

The largest mineral product of Italy is sulphur, of which there are more than 700 workings in the various volcanic districts. The annual output of marble, of which the statuary product of Carrara is the most famous, is large. Considerable quantities of zinc and lead are mined in Southeastern Sardinia, and the iron ore of the island of Elba has been celebrated since Roman times for its excellent quality. Other minerals obtained in the kingdom are lignite, copper, borax, silver, mercury, and salt.

The fisheries industry is important, employing many men. This includes fishing for coral and for sponges. In the lagoons of Comacchio the fish coming in from the sea are trapped by means of sluices.

The water-power in the mountain regions has been utilized considerably in the development of manufacturing industries. Thus large iron and steel works at Terni make use of the Cascades of Marmora. In Lombardy, Piedmont, Liguria, and Venetia silk-reeling, silk-throwing, and the cotton and woolen industries are important, and along the coast shipbuilding has attained considerable development.

SORRENTO

On the cliffs above the Gulf of Naples, embowered in orange groves, stands the little city of Sorrento. In Roman times Surrentum was famous for its villas, and the modern city is still a favored summer resort.

Italian Cities. Of the inhabitants of Italy (32,400,000), about one-fifth reside in cities having populations in excess of 10,000; a far larger proportion live in smaller towns, especially in Southern Italy and the islands, for gregariousness is characteristic of the race.

Naples is first among Italian cities in point of size and second only to Genoa as a seaport. It is beautifully situated on the northern shore of the far-famed Bay of Naples. Vesuvius at the right, gray by day, glowing by night, adds an element of solemnity to the scene. Naples has catacombs that excel in architecture those of Rome, a museum rich in antiquities, and mines of archæological treasures in the buried ruins of

AMALFI

Amalfi is quaintly built along the cliffs and hill slopes above the Gulf of Salerno. Its commerce, once rivaling that of Pisa and Genoa, has dwindled to little more than the traffic with the passing tourists.

Herculaneum and Pompeii. The houses and shops of the suburb of Resina are built over the site of Herculaneum, which is the more deeply covered.

Rome, capital of the kingdom, as it was of the ancient world, and seat of the Pope of the Roman Catholic Church, has lost its commercial supremacy even in Italy. Its position on the Tiber once gave the city importance as a trade center of the peninsula; its convenience as a seaport at the center of the then known world gave it commercial preëminence. Now, however, the river traffic is insignificant, and commerce has found new routes. As a storehouse of artistic antiquities, however, and of monuments of world history and of the Church, Rome remains supreme. Most of the classic remains are found on the Palatine, Aventine, and Cælian hills, which are included in the district called "Old Rome." In the Rome of the present day, however, there are at least eleven hills. On the left bank of the Tiber River, besides the three hills already mentioned, are the Capitoline, Esquiline, Viminal, Quirinal, Citorian, and Pincian; on the right bank stand the Janiculum, the highest of all, and the Vatican, whereon are situated the Papal Palace and the magnificent Basilica of St. Peter's with their wonderful stores of art treasures.

PORTA SAN PAOLO, WITH THE PYRAMID OF CESTIUS, ROME

The Porta, or Gate, of San Paolo, shown above, was built by Belisarius on the site of the Porta Ostiensis of the ancients; immediately to the west of the gate is the famous Pyramid of Cestius, the tomb of Caius Cestius, erected by Agrippa about 30 B. C.

PULPIT OF BAPTISTERY, PISA

In the center of the Baptistery at Pisa is a marble font, and near it the famous hexagonal pulpit designed by Niccolo Pisano. The reliefs show sacred scenes.

Milan is the greatest railway center in Northern Italy. It is situated on the Olona River in the center of the fertile Lombardy plain, and at the meeting-point of the east-and-west route between the Alps and the Apennine mountains and the north-and-south route from Italy over the Alps. Its most celebrated works of early architecture are the Basilica of St. Ambrose and the Milan Cathedral. Among its modern structures, the opera-house, La Scala, is the most noted. Milan is the principal financial center of Italy and one of the richest manufacturing and commercial cities in the country.

Turin, west of Milan, stands at the head of navigation on the Po River. In 1418 it was chosen as the capital of the dominions of the House of Savoy; in 1720 it was made the seat of government for the Kingdom of Sardinia; and from 1860 to 1865 it was the capital of Italy. The city is rich in beautiful palaces and churches. Its museum of Egyptian antiquities is the finest in Europe.

Genoa, the Mediterranean port of both Milan and Turin, as of all Lombardy and Piedmont, is the chief seaport of Italy. Vast sums have been expended in fitting the harbor for use by merchantmen and war vessels and in strengthening the fortifications. In point of architecture Genoa is celebrated chiefly for its large number of Renaissance palaces of Genoese nobility.

PIAZZA DEL DUOMO, PISA

The group of beautiful buildings on the Piazza del Duomo, a square just outside of the city of Pisa, is without a parallel in the world. These are the world-famous Leaning Tower, 179 feet high, the Cathedral, and the Baptistery, a circular structure surmounted by a dome. The Leaning Tower, completed in 1350, is the most modern. All are of white marble, exquisitely carved.

Florence, formerly the capital of the Grand Duchy of Tuscany and from 1865 to 1870 the administrative seat of the Italian Government, is the intellectual and artistic center of Italy. On the Arno River in a valley surrounded by spurs of the Apennine Mountains, Florence is favored alike in climate and in beauty of environment. Its chief art treasures are found in the Uffizi Gallery and the Palazzo Pitti; its leading work of architecture is the magnificent 13th century Cathedral, surmounted by a dome built by Brunelleschi. Leghorn, practically the port of Florence, ranks fourth among Italian cities as a seaport and second only to Genoa as a commercial town.

Bologna is a city of great antiquity, known in history successively as an Etruscan colony, a Gallic capital, a Roman colony, and, finally, a strategic point of importance throughout the struggles of the Italian States. Its university is the oldest in Europe.

THE ROTONDA, RAVENNA

The tomb of Theodoric, the Ostrogoth, who conquered Italy in 493 A. D., is known as the Rotonda. Its flat dome is formed by a single block of stone, weighing 450 tons. During the Middle Ages, the remains of Theodoric were removed and the tomb used as a church.

Venice, the medieval rival of Genoa and Pisa and in the 15th century mistress of the commerce of Europe, is now the sixth seaport of the kingdom. The city is built on 118 small islands in a lagoon, sheltered from the Adriatic Sea by a series of long, narrow bars, strengthened in some places with masonry. One hundred and fifty-seven canals constitute the chief avenues of communication; they are traversed by gondolas and steam and electric launches and are crossed by 378 bridges. The majority of the houses and palaces of the city are built on piles. The laces and art glass of Venice have been celebrated for centuries. The Venetian palaces are monuments of Gothic and Renaissance architecture and in them are preserved the treasures of Venetian painting and sculpture. The Cathedral of St. Mark, begun in the 9th century, is the dominant architectural feature of the city. The Campanile, completed in the 16th century, collapsed in 1902.

Palermo, the seat of administration for Sicily, is the fifth

MONTE DEL CAPPUCINI, TURIN

Turin, Italy, is situated on the River Po. Near the suspension bridge that crosses the river is a wooded hill called Monte del Cappucini. On the summit is an old Capuchin church. This hill, which was formerly fortified, commands a fine view of the river, the city, the plain of the Po, and the distant Alps.

seaport of the kingdom. Its admirable harbor works are supposed to date from the time of the Carthaginians. The principal exports of the city are wine, oranges, lemons, sumac, and sulphur.

Cagliari, the capital of the island of Sardinia, is an ancient Phœnician town, noted for Punic tombs hewn from the rock, a Roman amphitheater, and other antiquities.

Historical. The beginning of the Romans, who preceded the Italians, is hidden in mystery and legend. The Latins are said to have descended originally from the mountain glens of Umbria, near Rieti. Be that as it may, between 753 B. C., the legendary date of the founding of the city by Romulus, and A. D. 476, when the empire of the last of the Augusti passed under the rule of the Byzantine emperors, the Roman nation had risen to supreme power and had sunk again into decay.

Odoacer (476), who established the first Kingdom of Italy and placed it under the suzerainty of the Byzantine emperors, heads a long list of foreign rulers—Greeks, Franks, Germans, Spaniards, and Austrians—who successively governed the peninsula from distant capitals. The Byzantine rule gave way before the invasion of the Lombards, who remained in possession of Northern Italy until the middle of the 8th century. The rule of the Frankish emperors, of whom Charlemagne was the first and greatest, then began and continued for nearly two centuries (774–962). Finally King Berengarius was deposed by Otto I. of Germany, and Italy passed (961) under new masters. The German emperors labored to destroy the prestige of the papacy. This controversy, waged with varying success for three centuries, culminated in the bloody civil strife between the papal and imperial factions—the Guelfs and the Ghibellines. But in time the influence of the stronger princes restored order, and the peninsula was divided among five principal powers—the Kingdom of Naples, the Duchy of Milan, the republics of Florence and Venice, the Holy See, and the Kingdom of the Two Sicilies (1447).

PIAZZA DI SANTA MARIA NOVELLA, FLORENCE

In the Piazza di Santa Maria Novella took place many of the games and festivals of medieval Florence. Chief among these were the races on the Eve of St. John, for which two marble shafts served as goals. The Church of Santa Maria Novella is especially famous for its beautiful marble façade.

For more than two centuries and a half thereafter Italy was a pawn in Europe's game of war. Between 1796 and 1815 appeared the ephemeral readjustments of territorial lines, jurisdictions, and sovereignties incident to the Napoleonic régime. Under this régime had been developed a sentiment of nationality that rebelled at the despotism practiced by princes returning in bitterness of spirit from their exile. In 1848 the spirit of revolution was epidemic in Europe. The Young Italy party, with Giuseppe Mazzini at its head, then arose, seeking the establishment of a republic.

In 1849, however, with the fall of the last republic at Rome, Italy's hope of liberation seemed finally crushed. But King Vittorio Emanuele II. of Savoy, who had for his foremost minister the statesman Cavour, was determined on accomplishing that which he had set out to do. At the cost of sacrificing Nice and Savoy, the King secured an offensive alliance with France against Austria, and in 1861 Vittorio Emanuele II. was crowned King of Italy at Turin. But by a convention with France, Italy was bound to hold Papal Rome inviolable. In 1866 Venice was acquired by Italian activity in alliance with Prussia in the war of that power with Austria. As for Rome, Vittorio Emanuele, released from his obligations by the downfall of the French Empire in 1870, entered the city and removed his capital thither from Florence. The King to whom United Italy owed its existence died and was succeeded by his son Humbert in 1878. King Humbert was assassinated in 1900 by an Italian anarchist and was succeeded by his only son, Vittorio Emanuele III.

VENICE, FROM ST. MARK'S

Looking across the Grand Canal which winds through the heart of Venice, the eye rests upon the famous church of Santa Maria della Salute, and the old custom-house through which once passed the traffic of the great merchant city. Beyond lies the Canal della Giudecca and the church of Il Redentore.

Government, Religion, etc. The present constitution of Italy is an expansion of the Sardinian instrument granted in 1848 by King Carlo Alberto. The sovereign exercises executive authority through responsible ministers; legislative functions are vested in a

Parliament of two chambers. The Senate consists of princes of the blood royal and an unlimited number of members appointed for life by the King. The Chamber of Deputies consists of 508 members elected by limited manhood suffrage.

Military service is compulsory; every able-bodied male citizen between twenty and thirty-nine years of age is liable to enrollment.

Despite the fact that the civil government of Italy has been developed at the expense of the temporal sovereignty of the popes, the State religion of Italy is the Roman Catholic faith. Freedom of worship, however, is guaranteed. Although Rome has been absorbed in the Italian Kingdom, the Pope is permitted, as a sovereign prince, to hold diplomatic intercourse with other rulers, if desired.

Elementary instruction in Italy is free and compulsory; religious instruction is given children whose parents request it. All schools are under the control of the State. Of the twenty-one universities in Italy, seventeen are State institutions and four are free. Still, more than one-half of the population of the kingdom is classed as illiterate.

Italy has few foreign dependencies. The possession in Africa known as the Colony of Eritrea comprises a strip of Red Sea coast extending from Ras Kasar to Cape Dumairah. An endeavor to extend these possessions at the expense of Abyssinia led to the overwhelming Italian defeat in the battle of Adua (Adowa) in 1896, when Italy was compelled to restore considerable territory to the Negus and to recognize the independence of Abyssinia. In 1889 the Sultan of Obbia on the Somali Coast placed his sultanate under Italian protection, and subsequent extensions of Italian authority have given the kingdom a sphere of influence in Somali-land with an area of 100,000 square miles.

ARCH OF PEACE, MILAN

In the modern park back of the old castle stands a triumphal arch of white marble, marking the entrance to Napoleon's great military road connecting France and Italy by way of the Simplon Pass.

PANORAMA OF THE REPUBLIC OF SAN MARINO

The above picture admirably portrays the characteristic features of San Marino, which consist of part of a mountain spur, an eastern extension of the Roman Apennines. The imposing cone of its central and culminating summit, Monte Titano, a conspicuous object in the landscape on the road from Rimini, on closer inspection it is seen has three peaks—popularly designated the three "Penne" of San Marino, traditionally the origin of the three feathers in its coat of arms.

REPUBLIC OF SAN MARINO

The diminutive Republic of San Marino, one of the oldest States in Europe (area twenty-three square miles, population about 9,500), is embraced in the territory of Italy lying between Emilia and the Marches. The town is built along the slopes of a craggy mountain, 2,240 feet in height, about the base of which cluster a number of small municipal villages. Each has interesting remains of castles and fortifications dating from the feudal times when San Marino took part in the struggle between the great houses of Montefeltro and Malatesta. The settlement grew up around a convent known to have existed as early as 885. It obtained papal recognition as a State in 1631 and has ever since maintained its independence. It is governed by the Great Council of sixty members, two of whom are appointed semi-annually to act as Regents. There is also a smaller Council of twelve members and the usual executive departments of home and foreign affairs. The only extraordinary characteristic of the Government is the lack of a public debt. The army consists of about a thousand men. The climate in winter is rigorous but extremely healthful. The inhabitants are chiefly engaged in agriculture and the principal exports are wine, cattle, and stone.

STRADA REALE, VALETTA, MALTA

The streets of Valetta, the capital of Malta, founded in 1570, ascend precipitously from the quay, often by means of steep flights of steps, the city being built in the form of an amphitheater upon a promontory surrounded by deeply indented bays. Strada Reale, the principal street, is more than one-half of a mile in length. It contains the Palace of the Governor.

MALTA

The group of five islands of which Malta is the largest, lies midway between Gibraltar and Egypt, fifty-eight miles off the coast of Sicily. Malta itself contains only ninety-five square miles of apparently barren rocks and chasms, and owes its importance in history to its excellent harbor and strategic position. Phœnicians, Turks, Romans, Vandals, Arabs, and Normans successively conquered and lost the island until, in 1530, it was ceded to the Knights of St. John after their expulsion from Rhodes. But Napoleon seized it in 1798, and England gained final possession in 1814.

The occupancy of the Knights yet gives distinctive charm to Valetta, the capital, and the other villages of the island. Along the steep streets are many of the rich *auberges* or palaces once theirs; and the church of St. John is rich in legends as well as in beauty. The Moorish character of decoration adds an oriental atmosphere to the architecture everywhere on the island. This oriental effect is further enhanced by the prevailing language, which is a corrupt form of Arabic. The language of the upper classes is Italian.

In climate Malta resembles Africa far more than Europe. Frost and snow are unknown here. Although the soil is thin and sterile, almost the entire surface of the island of Malta has been brought under cultivation.

Surrounding Valetta are fertile gardens and luxuriant, well-tilled fields, made by the indefatigable patience of the inhabitants from the stubborn soil, and walled in for protection from the high winds. Here are raised enormous crops of potatoes (largely exported), corn, cotton, and fruit, and those fragrant flowers for which the island gardens have long been famous.

The Government of Malta consists of the Governor-General, the commandant of the garrison, and an Executive Council. Valetta is a port of call and second in importance to few in the world.

TURKEY

THE OTTOMAN EMPIRE for six hundred years has been a disturbing factor in international politics. Though shorn of much of its former greatness, and though utterly devoid of those internal elements of vitality that distinguish the progressive nations of history, Turkey is still sufficiently formidable to rank with Spain and the Scandinavian Kingdom as a second-class power.

ABDUL-HAMID II.

In 1876 Abdul-Hamid II., the thirty-fourth sultan of the house of Othman, and the twenty-eighth since the conquest of Constantinople, came to the throne of Turkey, succeeding his brother, Murad V.

The empire comprises territory in three continents. European Turkey stretches east and west across the Balkan Peninsula from the Adriatic and Ionian seas to the Black Sea, and north and south from Bulgaria, Servia, and Montenegro to Greece and the Ægean Sea. It also includes, under nominal suzerainty, the tributary but practically independent principality of Bulgaria; the provinces of Bosnia, and Herzegovina, with Novibazar, which have been administered since 1878 by Austria-Hungary. Asiatic Turkey is treated elsewhere in connection with the map of Asia. In Africa, Turkey rules over Tripoli and Barca and levies tribute from Egypt, which is practically, however, a British dependency.

Area and Physiography. The Turkish Empire has an area of over 2,530,000 square miles, or about twelve times that of Germany, but of this vast area only about 1,115,000 square miles is under direct Turkish rule, the remainder being tributary or under merely nominal suzerainty. European Turkey proper comprises an area of about 65,800 square miles. An almost equal area in Europe is also nominally under Ottoman jurisdiction.

A large part of European Turkey proper is covered with mountains of moderate elevation, the loftiest being the Rhodope or Despoto Dagh (averaging 7,464 feet) in the east, the Shar Dagh (9,800 feet) in Albania and Monastir, and the Dinaric Alps (Dinara, 6,010 feet) in the west (Bosnia). The principal rivers are the Maritsa (Maritza), draining Eastern Roumelia and the steppe-like basin of Adrianople and flowing into the Ægean Sea; and the Vardar, draining Macedonia and emptying into the Gulf of Salonica. Another notable river is the Struma or Karasu, flowing southward through Salonica into the Gulf of Contessa.

The geological structure of European Turkey has been but slightly explored, and though valuable metals are known to exist in both the Rhodope and Dinaric mountains, as iron, copper, silver, and lead, also other mineral substances, yet these resources have been but imperfectly developed up to the present time.

Macedonia, including the vilayet of Salonica and part of Monastir, naturally is the richest portion of European Turkey, containing many fertile hill-girdled plains. Albania, lying between Macedonia and the Adriatic Sea, is swampy and unhealthful along the coast, but mountainous inland. It includes Epirus, peopled by Greeks. The Albanians are a warlike race given to tribal strife and in religion are about equally divided between Mohammedans, Greeks, and Roman Catholics. The chief industries are cattle-breeding and, along the coast, olive cultivation.

Climate, Flora, and Fauna. The climate of European Turkey is moderate, the country being protected by the Balkan Mountains from the cold north winds, and its valleys and plateaus lying open to the sunny south. Only the mountainous regions have a rigorous winter. In summer the valleys are intensely hot, but in the uplands the heat is tempered by sea breezes. In the flora are included the beech, oak, lime, ash, maple, sycamore, walnut, chestnut, carob, box, myrtle, laurel, etc., with extensive forests of pine and fir in the northwest, and the olive, fig, orange, lemon, citron, vine, peach, plum, etc., in Albania. The forests are disappearing rapidly. In the Adrianople Plain are steppes like those of Asia. The fauna is both European and Asiatic, including the wolf and bear in the mountains, the jackal on the southern plains, and the buffalo and oriental fat-tailed sheep on the grazing lands.

CONSTANTINOPLE

Outlined in domes and minarets between the blue Bosporus below and the blue sky above, Constantinople appears to the traveler like some beautiful mirage. Gradually warmer color tones emerge as the sunlight glints on mosques and palaces half hidden by somber cypresses; and high above all looms the gleaming dome of the Mosque of Suleiman. This is Seraglio Point: beyond, mile on mile, stretch the crowded roofs of Stamboul, Galata, and Skutari.

Industries and Commerce. Agriculture, cattle-raising, and fishing are the chief industries. The soil is generally fertile, but only a small proportion of the arable land is cultivated, and little progress has been made in agriculture.

The breeding of sheep is carried on extensively, and wool is an important article of trade. Cultivated products include tobacco, opium, barley, maize, millet, rice, coffee, cotton, flax, hemp, silk, sesame and other oil-seeds, olives, nuts, and fruits. The mineral products are iron in large quantity, silver-lead, copper, sulphur, salt, alum, and coal. Manufactures are almost wholly domestic, such as hand-loom weaving of woolen and cotton stuffs, carpets, shawls, etc., and artisans' work (leather, firearms, etc.), with dyeing and printing works.

CHATLADI CAPOUSI, OR BUTCHERS' GATE, CONSTANTINOPLE

From the Seven Towers on the Sea of Marmora to the tip of the Golden Horn, a great wall twelve miles long encircles Constantinople. As originally built by Constantine and Theodosius, two inner and one outer wall, with a double row of towers and intervening moats, protected the city. But the massive masonry is now a crumbling ruin. The Butchers' Gate is in the eastern wall along the Sea of Marmora.

The great bulk of trade in the towns and almost all the shipping are controlled by Greeks, Armenians, Jews, or foreigners exempt from taxation. Direct railway communication between Turkey and Central Europe was established in 1888. From Belgrade by way of Sofia railways run to Constantinople and to Salonica, while a line along the coast connects Constantinople and Salonica and extends inland to Monastir, with a branch line from Usküb to Mitrovitsa.

The greater part of the foreign commerce of Turkey is in the hands of English, French, and Belgian merchants. Of the estimated value of the foreign trade of the empire five-eighths is included in the imports. The chief exports are grain, fruits, raisins, honey, oil-seeds, wax, wine, coffee, cotton, tobacco, opium, skins, mohair, wool, attar of roses, silk, carpets, swords, leather goods, etc. They are largely derived from the Asiatic provinces. Turkey at one time controlled the European market in morocco leather, carpets, and silk textiles. Among imports, cotton and woolen manufactures take the foremost rank. Other imports are linens, sugar, coffee, coal, petroleum, iron, hardware, flour, rice, skins and leather, timber, etc.

A STREET IN STAMBOUL, TURKEY

Stamboul, or Constantinople proper, as distinct from the many so-called suburbs, occupies the famous triangular promontory between the Golden Horn and the Sea of Marmora, on which the original city of Constantine was built. It is exclusively the Moslem quarter.

Historical. In ancient times the Balkan Peninsula, inhabited by various tribes of the Aryan stock, was a battle-ground of Persian and Greek, Macedonian and Roman. On the division of the Roman world A. D. 364 it became the center of the Byzantine or Eastern Empire, Constantinople having been rebuilt by Emperor Constantine. Invasions by "barbarians" followed in quick succession — by the Huns under Attila in the middle, and by the Ostrogoths at the end, of the 5th century; by the Huns and Slavs in the middle of the 6th century; by the Avars and Bulgarians in the 7th century, in which period, also, the Mohammedan califs first appeared before the walls of Constantinople.

Eight centuries later, in 1453, Mohammed II. took Constantinople and made it the capital of the great Ottoman Empire. Under Solyman I., "the Magnificent," "the Lawgiver," (1520–66) this empire reached the height of its power and glory, its territory covering about 230,000 square miles.

From the reign of Solyman I. historians date the decline of the Ottoman power. Under Selim II. (1566–74) occurred the first Russo-Turkish war, the Turks in vain attempting to capture Astrakhan (1569), which was defended by the soldiers of Ivan the Terrible. The glory of the empire continued to wane under the successors of Selim II.

For more than two centuries, Turkey continued a losing fight with Russia. The Empress Catharine II. in 1783 annexed the Crimea, and being joined in 1788 by Austria, entered on a war of extermination in Europe against Turkey, which was saved from partition in the reign of Selim III. (1789–1807) probably only by the Triple Alliance of England, Prussia, and Holland, formed to preserve the balance of power.

Eastern Question in 19th Century. The war with Russia was resumed in 1806, resulting in the extension of the Russian frontier to the Prut (Pruth) River (1812). In 1808 Mahmoud II. became head of the empire, the only sultan in modern times who has had the qualities of a great ruler. The Greek war for independence (1821–29), in which the Sultan called to his assistance Mehemet Ali, Pasha of Egypt, ended, owing to interference of the great powers of Europe, in the loss of that kingdom. Mehemet Ali, then turning against his sovereign, conquered Syria, which was ceded to him in 1833. From that time the Turkish rule over Egypt has been merely nominal. Turkey then concluded a defensive alliance with Russia, the terms of which, as they gave Russia practical control of the Dardanelles Strait, were unsatisfactory to France and England, and in 1841 the great powers of Europe closed the Dardanelles to war vessels of all nations except with the consent of Turkey, and virtually pledged the Ottoman Empire their protective guarantee of its independence and territorial integrity.

In 1853 the Emperor Nicholas I. of Russia asserted a claim to a

protectorate over all the Christian subjects of the Sultan. Out of this grew the Crimean War (1853–56), which resulted in the abolition of the Russian protectorate over the principalities along the Danube River. In the reign of Abdul-Aziz (1861–76) a growth of national feeling manifested itself in the Balkan States Bosnia and Herzegovina revolted in 1875. The misrule of the Sultan brought the empire

MOSQUE OF ST. SOPHIA, CONSTANTINOPLE

In the enclosure of Stamboul stands the former church of Constantine the Great and his successor Justinian. The foundations were laid in 325, the year of the founding of Constantinople; and from that time until the city was lost to the Turks in 1453, the Church was the center of the political and religious life of the Byzantine Empire. Under the sultans also as a mosque it was similarly honored until superseded by the Mosque of Ahmed.

to bankruptcy and led to his deposition in 1876. Murad V., his successor, eldest son of the Sultan Abdul-Medjid, after three months' rule, was deposed and was succeeded by his younger brother Abdul-Hamid II., who still (1903) occupies the throne.

The unrest in the peninsula had by this time spread into Bulgaria, Servia, and Montenegro, and the "Bulgarian massacres" exeited the horror of the civilized world and led to war with Russia, which was ended March 3, 1878, by the Treaty of San Stefano. The territorial adjustment provided for in this treaty was most unsatisfactory to England and Austria, on whose initiative there assembled, June 13, 1878, the famous Berlin Congress, which made the map of Southeastern Europe practically what it is to-day.

GATE OF THE MOSQUE OF ST. SOPHIA, CONSTANTINOPLE

The years 1894, 1895, and 1896 were marked by outrages upon missionaries and by horrible massacres of Christians in Armenia. In 1897 a war between Greece and Turkey resulted from Greek intervention in aid of a rebellion of the Christians at Crete. The Turks were signally victorious; and in the settlement, Greece lost to Turkey some small territory in the rectification of her northern frontier and was forced to pay an indemnity as well as to accept international control of her fiscal affairs. Crete, however, was practically freed from Turkish rule.

People and Cities. The total population of the Ottoman Empire is about 50,000,000, only about one-half of whom, however, are under direct Turkish rule, the remainder being inhabitants of the principalities and provinces over which the Porte exercises a merely nominal jurisdiction. In European Turkey about 24 per cent of the people are Osmanli Turks, the dominant race in the empire. Greeks and Albanians are almost equally numerous. Other races represented are Serbs, Bulgarians, Roumanians, Armenians, Magyars, Gypsies, Jews, and Circassians. One-half of the people are Sunni Mohammedans, who alone possess civil rights and have to bear the burden of military service. Seven non-Mohammedan creeds are also recognized, namely, the Roman Catholic, Protestant, Jewish, Greek, Armenian, Syrian, and Maronite. Connected with the mosques in the empire, a system of elementary free schools is sustained. At Constantinople are also a university, founded in 1900, an imperial art school, an old National school (Greek), and a Greek theological seminary. Most of the other large towns have public schools.

Constantinople, the capital of the empire, occupies the site of the ancient Greek colony of Byzantium, founded 656 B.C. Among the many structures testifying to its former magnificence is the mosque of St. Sophia, originally a Christian church. The Sublime Porte, a name now synonymous with the Turkish Government, originally signified one of the gates of the old palace of the Sultans, at the eastern end of the city. Pera and Galata, suburbs on the northern shore of the Golden Horn, constitute the modern commercial city. Skutari, across the Bosporus, is entirely Turkish.

Adrianople, at the head of navigation on the Maritsa River, is the most important interior town and military post of European Turkey; it manufactures attar of roses, silks, and carpets. Salonica, inhabited chiefly by Spanish Jews, is the seaport of Western Turkey and is situated at the mouth of the great Vardar River, on the most direct route from Western and Central Europe to Greece and Egypt. Dede-Agach, near the mouth of the Maritsa River, exports chiefly grain. Üsküb, on the Upper Vardar in old Servia, is at the junction of the roads from Servia, Bosnia, and Montenegro to Salonica. Gallipoli is on the strongly fortified channel of the Dardanelles.

Government. The government of Turkey is a hereditary absolute monarchy, the order of succession being by seniority among all male descendants of Othman sprung from the imperial harem. The Sultan's will is law, its only limitation being that it must not contravene the accepted doctrines of the Mohammedan faith as laid down in the Koran, in the oral sayings and commentaries of the Prophet and his successors as embodied in the "Multeka," and in the interpretation of the same by the high-priesthood. In the administration the Sultan is assisted by the Grand Vizier, head of the temporal government, and the Sheikh ul Islam, head of the Church. The Grand Vizier and the Sheikh ul Islam are both appointed by the Sultan.

TOMBS OF THE SULTANS, EYUB, CONSTANTINOPLE

Through fear of being ultimately driven out of Europe, Skutari on the Asiatic coast is the great Turkish burial ground, but most of the royal tombs are located in Stamboul or in Eyub, a pleasant little suburb north of the city proper.

The fiscal operations of the Government have for many years shown a deficit. The public debt, chiefly incurred through unsuc-

PALACE OF YILDIS AND MOSQUE AHMED, CONSTANTINOPLE

The Palace of Yildis and the Mosque of Ahmed are situated in the great square where stood formerly the famous Hippodrome. On account of this favorable location, as well as of its magnificence, the Mosque has become the center of all state religious ceremonies. Of these perhaps the most interesting are the spring festivals of the Bairam, when the city is given over to pleasure and the Sultan and all his court appear in greatest splendor.

cessful wars since 1854, is very heavy, and the interest payments are always in arrears.

All Mussulmans after reaching their twentieth birthday are liable to service in the army for twenty years, six of which are in the regular service. Twelve years is the period of naval service.

A TURKISH CAFÉ

THE "BURNT COLUMN," (DJEMBERLI TASCH) CONSTANTINOPLE

This column, nearly one hundred feet high, which, it is believed, once bore the statue of Constantine, is really of porphyry, the joints hid by copper rings; but it has been so defaced and blackened by the frequent fires that have happened to the houses in its vicinity as to receive the name of the "Burnt Column."

CRETE

Crete, or Candia, famous in Homer's time as the "Island of a Hundred Cities," lies in the Mediterranean Sea, about 100 miles directly south of Athens. It is about 160 miles long, from six to thirty-five miles wide, and is traversed east and west throughout its length by a mountain-chain at the center of which is Kaz-Dagh (Ida), the fabled birthplace of Zeus. The mountains are of calcareous formation. Caverns and grottoes abound, whence, probably, arose the legend of the labyrinth of Minos. The island was conquered by the Romans 67 B. C. and by the Saracens A. D. 823, and later became a part of the Byzantine Empire. It was ceded to Venice at the beginning of the 13th century and was captured by the Turks in 1669. Its subsequent history was one of almost perpetual revolt. In the last revolt (1896–97), the christians were aided by Greece, which sent an army of occupation to the island and aimed at its annexation. After the defeat of Greece in the war with Turkey which resulted, the island was made an autonomous State under a High Commissioner, Prince George, second son of King George I. of Greece, representing Great Britain, Russia, France, and Italy. The suzerainty of Turkey, however, is still recognized, but all Turkish troops have been withdrawn and the Turkish flag may be displayed only at Suda on Suda Bay. The climate is healthful. The chief products are olive oil, wheat, and oranges and other fruits. Wine, chestnuts, and silk are also produced. Sheep and goats are numerous. The principal exports are wool, olive oil, and cheese. The chief towns are Kanea (Khania), the capital; Candia, the ancient Herakleion; and Retimo. The island abounds in archæological remains of great interest to students of antiquity. The site of Cnosus, ancient seat of King Minos, about four miles southeast of Candia, has been uncovered, among its remains being found a palace dating from about 1400 B. C. and containing tablets inscribed with linear characters that settle the long debated question of the existence of writing in the Mycenæan age.

GATE OF SERASKIERAT, TURKEY

The Seraskierat, or war office, of the Sultan's government, stands where the forum of the Byzantine Emperor Theodosius stood, on the summit of one of the city's seven hills.

THE BALKAN STATES

THE BALKAN PENINSULA is the most easterly of the three great peninsulas of Southern Europe. The southernmost portion is occupied by the Kingdom of Greece, which, however, is not considered a Balkan State. The Balkan States proper, besides Turkey (separately treated), are Servia, Bulgaria, and Montenegro. All were formerly under direct Turkish rule, which extended also over Roumania and parts of Austria-Hungary.

On the northeast the peninsula borders the Black Sea; at the southeast its continuity with Asia Minor is broken only by the narrow straits of the Bosporus and the Dardanelles and by the Sea of Marmora. The southern coast of Turkey is in general low and uniform in outline, but is broken at the west by the deeply indented peninsula of Chalcidice, between the gulfs of Contessa and Salonica. The coast of Greece is extremely irregular in outline. The western coast of the peninsula is comparatively flat almost as far north as Montenegro, but thereafter it is mountainous and fringed with long, narrow islands and headlands inclosing submerged valleys.

KING OF ROUMANIA

Carol I. of the house of Hohenzollern-Sigmaringen was elected Lord of Roumania in 1866 and proclaimed King in 1881. His nephew, Prince Ferdinand of Roumania, is the next heir to the throne.

Mountains and Rivers. The most striking topographical features of the peninsula are two great mountain systems—the Balkans, a continuation of the Carpathians, in the northeast, and the Dinaric Alps in the west, a southerly extension of the great Alpine system of Central Europe. The general elevation of the Balkan range is about 4,000 feet, but in the central portion it averages from 4,500 to 6,500 feet, with single summits considerably higher, notably Jumrukčal (7,790 feet), northeast of Philippopolis. On the Servian frontier the highest peak is Midzur. The mountains decrease in elevation as they approach the Black Sea and diverge into several parallel chains. The Balkans throughout are principally of granite formation, and abound in metal-bearing rocks.

The northern range of the Balkan Mountains is crossed by thirty or more passes, of which the highest are the Rabanica and the Rosalita. The most important strategically and the most used is the Sipka Pass, which was the scene of desperate fighting between the Turks and the Russians in 1877. South of the Balkans, the low parallel ranges of the Anti-Balkan Mountains, culminating in the peak of Vitosa, overlook the valley of the Maritsa, the most considerable river of European Turkey, which curves around the eastern end of the Rhodope Mountains on its way to the Ægean Sea. Toward the southwest rise numerous spurs inclosing fertile valley plains of which the most important is that of Sofia. From this plain the Isker River flows northward through a narrow gorge in the Balkan Range on its way to the Danube River, the great commercial artery of Central Europe. The Danube flows through Würtemberg and Bavaria, drains the great plain of Austria-Hungary and the plains of Bulgaria and Roumania, and empties into the Black Sea by three mouths, forming a delta.

In the western part of the peninsula the Dinaric Alps extend in parallel chains southeastward along the coast of the Adriatic Sea, through Dalmatia, Bosnia, Herzegovina, Montenegro, and Albania, into Greece. They consist mainly of cretaceous limestones rising in rugged platforms and crests with intervening longitudinal valleys.

Between the Dinaric Alps and the Balkan mountains the country consists of highlands of extremely irregular contour. Here and there are lofty rounded mountains of ancient crystalline rocks, or broad undulating hills inclosing fertile river valleys. These valleys form the chief lines of communication through the peninsula and indicate the principal centers of cultivation and population.

Climate, Flora, and Fauna. In the central and northeastern parts of the peninsula the climate in winter is severe with heavy snowfall, but in summer it is warm and genial. The rainfall is well distributed throughout the year. The Ægean coast enjoys the mild climate characteristic of the Mediterranean region, with very dry summers. On the western coast heavy rains prevail at all seasons, especially in the north, and the average temperature is higher than in the east.

In the plain of Adrianople vegetation is restricted to grasses and stunted shrubs. In the central portion of the peninsula it comprises the forests and fruits of Central Europe, but in the south it is scanty. On the western coast flourish the olive, fig, orange, lemon, and vine, and the evergreen shrubs typical of the Mediterranean region of Europe.

NEST OF THE CROWN PRINCESS, SINAÏA

This picturesque woodland retreat at the country seat of the King of Roumania, at Sinaïa, is a favorite resort of the Crown Princess Marie, a grand-daughter of Queen Victoria of England and also of Alexander II. of Russia.

CHURCH OF DONNA BALASCHA, YASSY, ROUMANIA

Yassy, until 1861 the capital of Moldavia, is picturesquely situated upon two wooded hills, and is quite Parisian in its general appearance and life. The Eastern characteristics which blend with this modern aspect, however, are well illustrated by the beautiful Byzantine architecture of the Church of Donna Balascha.

Among wild animals common to the Balkan states are included the wolf and bear in the mountains and the jackal in the southern plains.

In ancient times the Balkan Peninsula was occupied by various branches of the Aryan stock, the Thracians in the northeast, the Illyrians in the northwest, and the Greeks in the south, whose commingling gave rise to the mixed Macedonian type inhabiting the northern central part of the peninsula. Under Roman, and especially under Byzantine rule, it attained its highest development, Constantinople becoming the chief center of the world's civilization and commerce. In the 7th century A. D. the Servians and Bulgarians, of Slavonic stock, pressed southward into the peninsula, driving the Greeks before them to the south, the Illyrians to the southwest, and the Romans back toward the northwest. The introduction of Christianity in the 9th century marked the transition from barbarism to civilization. For a time the Bulgarians were masters of the peninsula, but in the 14th century the Servians established a short-lived supremacy which, by the defeat of their army in 1389, followed by the fall of Constantinople in 1453, gave way before the irresistible advance of the Turk. Four centuries of retrogression ensued, and it was not until the 19th century that, under Russian influence, the Balkan peoples were aroused to struggle for freedom from the Turkish yoke.

KING PETER OF SERVIA.

Peter Karageorgevitch, King of Servia, is a grandson of the peasant Kara George, who led the Servian forces against Turkey early in the last century. He came to the throne by right of revolution, King Alexander having been assassinated June 11, 1903.

ROUMANIA

The Kingdom of Roumania, properly a Danubian State but sometimes classed as a Balkan State, and most conveniently described in this connection, comprises the provinces of Moldavia and Walachia, formerly belonging to Turkey, together with the territory of the Dobruja (Dobrudschá), which includes the delta of the Danube River and stretches southward along the Black Sea coast east of Walachia to the Bulgarian frontier. The existence of Roumania as an independent State was recognized by the Treaty of Berlin of July 13, 1878, which followed the defeat of Turkey in the war of 1877–78 with Russia. It was not, however, till March, 1881, that Roumania was declared a hereditary kingdom.

Rivers and Mountains. With the exception of the Dobruja, a steppe-like pastoral plateau, Roumania consists of a low plain, rising slightly toward the north and west, well wooded on the declivities of the mountains and watered by the Sereth and other tributaries of the Danube River. Northeast of the Dobruja is the immense swampy delta through which the Danube empties, by several mouths, into the Black Sea. Of these outlets the most important are the Kilia at the north, the Sulina in the center, and the St. George at the south. Navigation of the Danube is under control of an international commission. In 1892 a large dock was opened at Brăila (Brahilov), and in September, 1896, the reefs and rapids of the Iron Gates, the hitherto dangerous obstructions that barred the Transylvanian egress of the Danube, were overcome by a canal built on the right or Servian bank.

Strategically the position of Roumania is one of commanding importance. It stands in the pathway of the Russian advance toward the Mediterranean Sea, and its territorial security depends upon that delicate tension of international relations that preserves the balance of power in Southeastern Europe. Roumania has an area of about 46,300 square miles. Of its population (5,900,000) fully nine-elevenths belong to the Greek Church, other faiths being few in number.

Climate, Resources, and Cities. The climate of Roumania is rigorous. The mean annual temperature at Bukarest is 51°, with a range of over 100°. The soil of the kingdom is fertile, and were it not for the insufficient and irregular rainfall it would be among the most productive in Europe. On the plain, wheat, maize, millet, barley, rye, beans, and peas are grown, and on the hill slopes fruits and the vine. The forests are of great extent and value, and large herds of cattle, sheep, and horses are raised on the immense stretches of pasture-land. Salt and petroleum are the only minerals that are worked. Of the exports about 73 per cent consist of wheat, barley, and maize, the remainder comprising chiefly cattle, hides, spirits, rock-salt, and wood. The principal imports are manufactured goods. In recent years the export trade has increased largely.

Bukarest (Bucharest), the capital, on the Dimbovitza River in Walachia, is a beautiful city having a number of handsome hotels and several ancient picturesque churches. The Royal Palace, greatly improved when rebuilt in 1885, is here, and also the State University. This city is a center of trade between Turkey and Austria, and is gaining in wealth. Other important cities include Ploesci (Ployesti), at the foot of the mountains north of Bukarest; Craiova (Crajova), in Western Walachia; Yassy (Roumanian Jassĭ), the provincial capital, and Botuschani, in Moldavia; and Galatz and Brăila, the chief commercial ports, on the left bank on the lower Danube near the mouths of the Sereth and Prut rivers.

Roumania in ancient times was part of the Roman province of

BELGRADE, SERVIA

The situation of Belgrade, the capital of Servia, at the junction of the Save and the Danube, has rendered it not only a place of great strategic importance but has given it control of the commerce between Austria-Hungary and all the States of the Balkan Peninsula. From the standpoint of picturesqueness also, Belgrade is fortunate, rising tier above tier from the rivers along the wooded hills. The rapid building up of the city since the withdrawal of the Turkish forces in 1869 has almost obliterated its former oriental character.

Dacia. The language of the country is closely allied to the Latin, but the origin of the Roumanian people is uncertain. Moldavia and Walachia after a long struggle became united and practically independent of both Turkey and Russia in 1859, although it was not until 1878 that their independence was recognized by the Treaty of Berlin. In 1881 Roumania was raised to the status of a kingdom.

SERVIA

The Kingdom of Servia is the most fertile and densely populated of the Balkan States. Its development, however, has been hindered by internal and external political unrest, by the effects of a long subserviency to Ottoman rule, and by a characteristic lack of diligence in its people. Its area is about 18,700 square miles, or a little more than twice the size of the State of New Hampshire. Its native race, the Serbo, who constitute the bulk of the population (2,500,000), form one of the Slavonic branches of the Aryan stock and belong, with few exceptions, to the established Greek Church.

FERDINAND, PRINCE OF BULGARIA

Ferdinand, the youngest son of the Prince of Saxe-Coburg and Gotha, was elected Prince of Bulgaria by the National Assembly in 1887.

Mountains, Resources, etc. The eastern portion of the kingdom is diversified by rugged spurs of the Balkan Mountains between which flow the upper waters of the Morava River and its tributaries; here are extensive but little developed resources in copper, iron, lead, coal, and other minerals. The western portion, drained northward into the Danube by the Morava and its tributary, the Western Morava River, is a rich undulating district, varied by beautiful oak-forested hills and fertile intervening valleys and fields.

Agriculture, carried on by primitive methods, and the raising of live stock, especially of swine in the oak forests under government supervision, are the staple industries. The principal crops are maize and wheat, plums (prunes), flax, hemp, and tobacco. The wine industry has suffered from phylloxera and unfavorable seasons. Silk culture is followed to a limited extent. Carpet-weaving, embroidery, and the making of jewelry and filigree work, tiles, and glass are other industries. Over 11 per cent of the exports consist of prunes; other important exports comprise pigs and wool, besides wheat, wine, horses, cattle, fowls, hides, and cask staves. Imports consist chiefly of cotton and woolen goods, sugar, hardware, metals, and hides, skins, and leather. Only the border rivers, the Danube, Save, and Drina, are navigable. The roads of the country in general are in bad condition, and there are less than 400 miles of railway.

Belgrade, the capital, finely situated on a hill at the junction of the Save and Danube rivers not far above the mouth of the Morava River, is the one important city of the Kingdom. It has an ancient and strongly built fortress, and several fine buildings, including the royal palace and the national theater. It is also the seat of the State University.

Historical, etc. Servia was settled by the Serbs in the 7th century, but in 1389 was conquered by Turkey. In 1718 it was ceded to Austria, but was regained by the Turks in 1739. Servia was the first of the Balkan States to achieve independence of Ottoman rule, which it practically accomplished in 1829; but it was not until 1878 that the complete independence of Servia was recognized by the Treaty of Berlin. In 1882 it was declared a hereditary kingdom, and in 1889 the powers of the sovereign were limited by a constitution establishing a "Skupshtina" or popularly elected national Chamber of Deputies. King Milan, after a stormy career of financial extravagance and domestic infelicity, abdicated in March, 1889, in favor of his young son Alexander I., who in April, 1893, although not of age, forcibly assumed the reins of government and in the following year abolished the constitution. A new constitution of a drastic character was proclaimed in April, 1901. The Revolution of June 11, 1903, followed, in which the King and Queen were assassinated and Peter Karageorgevitch was proclaimed King.

Education in Servia is compulsory and free. Every man between eighteen and fifty years of age is liable to military service.

BULGARIA

The Principality of Bulgaria, nominally under the suzerainty of the Ottoman Empire to which it pays annual tribute, but autonomous and practically independent under guarantee of the great powers of Europe, is the strongest of the Balkan States. The area is about 38,000 square miles, of which 12,700 square miles are comprised in Southern Bulgaria. More than three-fourths of the population (3,730,000) are Bulgarians.

Surface, Resources, etc. Physically the principality is divided into two almost equal parts by the Balkan Range that crosses at about its center from the Servian border to the Black Sea. The northern half is a plateau descending to the Danube and watered by a few small tributaries of that river. This section has a fertile soil, but the climate is extreme and dry, with wide range and sudden changes of temperature. The southern half, comprising a number of hill-girdled basins, enjoys much more advantageous conditions.

Agriculture and cattle-raising are the chief industries. Wheat and maize are the principal crops in Northern Bulgaria. In Southern Bulgaria rice, cotton, tobacco, and grapes and other fruit, particularly plums, are also cultivated. Silk culture is an important industry. On the southern slopes of the Balkans roses are grown in great quantities for the manufacture of attar of roses. Live-stock includes sheep, goats, swine, cattle, and buffaloes. The forests on the mountains yield fine timber. Mineral resources belong to the Government and include extensive deposits of iron, salt, and building stone. Coal-mines are also worked, and gold, silver, copper, and manganese are found. Manufactures are mainly textiles, cigars and cigarettes, and iron wares. Trade is largely in the hands of Greeks, Austrians, and Roumanians, and commerce is principally with Turkey, the United Kingdom, France, and Germany. Exports consist chiefly of cereals (particularly wheat), live stock, skins, cheese, eggs, timber, attar of roses, cocoons, and tobacco. The principal imports are textiles, metal goods, machinery, leather, building materials, coal, petroleum and other oils, rice, paper, salt, and fish

Sofia, the capital, occupies an ancient site and has been rebuilt after the Russian style. It is situated in a plain

HOUSE OF THE NATIONAL ASSEMBLY, SOFIA

The House of the Sobranje, or National Assembly, is a modern building in the new, or "European," town which has sprung up since the Turkish government gave place to that established by the Treaty of Berlin in 1878.

between the Vitosa Mountains and the Balkans and is the seat of a university. Philippopolis, the former capital of Eastern Roumelia but now only the center of a prefecture, occupies an elevated site overlooking the Maritsa River. Rushchuk (Rustchuk), Viddin (Widin), and Silistria are fortified towns along the Danube River. Plevna, commanding one of the Balkan passes in the eastern part of the Bulgarian Plateau, is famous for its heroic but unsuccessful defense by the Turks under Osman Pasha against the Russians in 1877. Varna and Burgas are important Black Sea ports north and south, respectively, of the Balkans.

PRINCE NICHOLAS OF MONTENEGRO

Nicholas I. was proclaimed Prince or Gospodar in 1860, but it was not until 1878 that Montenegro was formally recognized as an independent principality.

Historical and Political. Bulgaria was colonized by the Bulgars, a tribe of Slavonic stock, in the 6th century. For a time, in the 9th and 10th centuries and again in the 12th century, it was dominant over a great part of the Balkan Peninsula. The country was, however, unable to withstand the Turks and became a part of the Ottoman Empire in 1396.

It was not until after the middle of the 19th century that the Bulgarians began their struggle for national independence. The principality is still nominally under Turkish suzerainty and pays an annual tribute to the Porte, but has been practically autonomous since 1878. Russian influence, however, is dominant. In 1878, following the defeat of Turkey by Russia, Bulgaria, comprising the land between the Danube River and the Balkan Mountains, together with the Sofia Plain, was constituted by the Treaty of Berlin an autonomous and tributary principality under the suzerainty of Turkey, with a Christian government and a national militia. Eastern Roumelia, now known as Southern Bulgaria, was constituted at the same time an autonomous province of Turkey, but as a result of a successful revolution in 1885, its union with Bulgaria was proclaimed. Turkey still has the right, in case of war, to occupy the passes in the Balkan Mountains.

The ruling Prince of Bulgaria is chosen by the Grand Sobranjé or National Assembly, elected for the purpose, and is confirmed by the Porte.

Political conditions in Bulgaria, as in the Balkan Peninsula in general, are always in a state of greater or less unrest. A desire to annex the adjacent provinces of European Turkey, inhabited by Slavs, especially the eastern district of Monastir, Macedonia, has long been widely cherished, owing to which an outbreak of hostilities between Bulgaria and Turkey is always imminent and there is more or less tension with Servia, Greece, and Austria. Military service is obligatory from the age of twenty to the age of forty-five, but Mussulmans are exempt on payment of a tax.

The established church is the Orthodox Greek. Other religions represented are the Mohammedan, Jewish, Roman Catholic, Armenian Gregorian, and Protestant. Elementary education is free and nominally compulsory for children from eight to twelve years of age.

MONTENEGRO

The small independent Principality of Montenegro, peopled by hardy mountaineers, is situated in the rugged region of the Kara Dagh or Black Mountains (whence the name Crnagora or Montenegro), with a narrow seaboard of about twenty-eight miles on the eastern shore of the Adriatic Sea, north of the Turkish province of Albania. The extreme length of the principality, north and south, is about 100 miles, its width eighty miles, and its area about 3,630 square miles. The population (227,000) is mainly made up of descendants of Servians who refused to acknowledge Turkish supremacy and who took refuge toward the end of the 14th century in the fastnesses of the Karst Mountains, where they have since maintained their independence. The prevailing religion is that of the Greek Church, although there is nominally no established church. Russian influence is dominant in the principality, which derives a part of its revenue and military supplies by direct contribution from the Russian Government.

Surface, Resources, etc. By the Treaty of Berlin in 1878 not only was the absolute independence of the principality recognized by Turkey, but its territory was almost doubled, giving it for the first time an outlet to the sea in a narrow coastal strip containing the two ports of Antivari and Dulcigno. The whole country is a mass of elevated, rocky ridges. In the north the main water-supply in summer comes from the snows of Mount Durmitor (Dormitor); in the east, around the head waters of the Tara and Lim rivers, are rich pasture-lands and fertile valleys, while a warm and genial climate is also enjoyed by the valleys in the south. The uncultivated area is largely covered with dense, dark forests of oak, beech, and conifers, which originally were much more extensive and which originated the name by which the country is known.

PALACE OF THE PRINCE OF MONTENEGRO

Cetinje, the capital of Montenegro, picturesquely situated in the green basin of an ancient lake, high up among the limestone peaks, is reached by a magnificent road which discloses a succession of beautiful views. The Palace is a plain white stone building; and the town, aside from the Palace and the Monastery where the archimandrite and the bishop live, consists of two streets lined with stone cottages.

Agricultural and pastoral pursuits engage most of the people. Sheep, goats, cattle, horses, and swine are the chief means of subsistence, but corn, potatoes, and tobacco are grown; and in the warm, fertile valleys of the south and east the vine, olive, fig, pomegranate, and almond are also cultivated. The sardine industry is considerable, but manufactures are confined mainly to coarse woolens and to a small quantity of wine. Austria controls the bulk of the commerce. The public revenue is not large, but there is no public debt. No standing army is maintained except the battalion of 800 men who form the palace guard at Cetinje (Cetigne), the capital, but all able-bodied men are trained as soldiers and are liable to service, except Mussulmans, who are exempt on payment of a tax. The ruling Prince or "Gospodar" is practically an autocrat, although assisted by a council and a ministry.

GREECE

THE KINGDOM OF GREECE comprises the southern part of the Balkan Peninsula, extending southward from the Continent of Europe into the Mediterranean Sea, and the Ionian Islands, Eubœa, the Cyclades, and some smaller islands, and has an area of 25,014 square miles. The coast of Greece is almost universally bold, rugged, and barren. The forested areas are confined, with few exceptions, to the slopes and summits of the mountains of the interior and to the Ionian coast; and notwithstanding the devastation which mismanagement has wrought they still contain large quantities of valuable timber.

Mountains. The surface of the kingdom is exceedingly mountainous, so much so that no part of the country is ten miles from the hills. The dominating feature of its mountain system is the Pindus Range. The mountains of the Morea or Peloponnesus do not belong to the same system as those of Northern Greece, nor do they extend as connected chains, but occur rather in clusters· the more important of these are Ziria (Kyllēnē), Khelmos, Erymanthos (Olonos), and the Pentedaktylon (five-fingered). The peculiarity of the mountains of Greece does not consist in their lofty altitudes so much as in the number that attain a considerable and nearly equal elevation; none, however, within the confines of the present kingdom, attains the altitude of Mount Olympus (9,800 feet).

GEORGIOS I., KING OF GREECE

Georgios I., the second son of the present King of Denmark, was elected King of the Hellenes by the National Assembly at Athens, March 18, 1863. He married, in 1867, Olga, the eldest daughter of Grand Duke Constantine of Russia, brother of the late Czar Alexander II.

Geologically considered, the whole chain of the Pindus Mountains is composed of primitive rocks, as granite, porphyry, mica, and other schists, but the greater part of the other ranges consists of rocks of the secondary formation, especially abounding in a compact gray limestone, which has hardened in many places into the finest building stone. Gold and silver exist, but not in sufficient quantity to be profitably mined. Copper and iron are more abundant. Coal is found, also gypsum, lead, emery, manganese, sulphur, and salt.

Ionian and Other Islands. The islands of Greece form an important part of the kingdom, comprising about one-sixth of its entire area. The most important are the Ionian Islands, lying off the west coast of Greece and Turkey in the Ionian Sea, the whole embracing an area of more than 1,000 square miles. Corfu has always held the foremost place in the group, owing to its proximity to Italy, and to the commercial advantages afforded by an excellent port and a vast roadstead near its capital, the city of Corfu. In the Ægean Sea is a group known as the Cyclades, from their fancied circular arrangement around the sacred island of Dēlos, in contradistinction to the Sporades, adjoining them. Separated from this group by the Doro Channel is the large island of Eubœa (Evvia), classed as a part of the Continent. South of Greece is the island of Cerigo, once celebrated for the worship of Venus by its inhabitants.

Valleys, Plains, and Rivers. The valleys of Greece are narrow and its plains are small in extent, being rather deep basins walled in by the hills or expansions of the river deltas. The most extensive plains are those of Thessaly, Bœotia, Messenia, Argos, and Marathon, which, having an alluvial soil, form the most fertile regions of Greece. In some sections of the country are table-lands, as in Morea, and among such elevated plains are those of Mantineia (2,000 feet) and Seiritis (3,000 feet), near Tripolis.

The few rivers of Greece are small and rapid; none is navigable. They rise in the mountains, have comparatively few affluents, and throughout almost their entire lengths pursue precipitous courses. Many of them are dry during the summer months, being filled with water only at the time of the autumn rains. The principal streams are the Peneios or Salamvria, Sperkheios or Hellada, and Aspropotamo, the ancient Acheloos, in Northern Greece, and the Rhouphia or Alpheios and Eurotas or Iris in Southern Greece. One peculiarity of the rivers of Greece is that in many instances they suddenly disappear in subterranean passages and reappear at considerable distances from the point of subsidence. Some of these underground courses are caverns through which the streams may be easily traced, while other rivers percolate through gravelly sieves to lower and hidden openings. While the streams of Greece are rapid there are few waterfalls, the Styx cataract in Arcadia, where the descent is about 500 feet, being the only noteworthy one.

ROYAL PALACE AND PLACE DE LA CONSTITUTION, ATHENS

The Place de la Constitution, beautiful in its setting of well-kept lawns, adorned with tropical shrubs and trees, is the center of modern Athens. On its eastern side stands the imposing new palace built of Pentelic marble.

THE PIRÆUS

The Piræus has always, throughout history, been closely associated with Athens, of which it is the seaport. It attained the height of its prosperity in the age of Pericles, when the great walls made practically one city of the two centers of Athenian life. After 86 B. C. it sank into obscurity, and the modern city, now the leading port of Greece, dates from 1835.

Lakes and Coast-line. Greece has a number of lakes, but most of them are very small. The most important are Trikhonis (Trichonis) in Ætolia, twelve miles long and three miles wide; Pheneos (Phōnia) in Argolis, covering about nine square miles;

A THESSALIAN BULLOCK CART

Up-to-date farming methods are not characteristic of Southern Europe, and perhaps in no section are the modes of tilling the soil so primitive as in Thessaly, the most fertile part of Greece. The plows used differ little from those described by Hesiod, 850 B. C., and oxen and bullocks are almost wholly depended upon for farm labor.

and Stymphalos in Argolis, nearly a square mile in area. The draining of the largest lake, Kopais in Attica, has reclaimed a fertile tract of land comprising about 100 square miles.

Strabo, "The Father of Geography," said that "the guiding thing in the geography of Greece is the sea which presses upon it at all parts, with a thousand arms." From the Gulf of Arta on the west to the Gulf of Volos on the east the coast is indented with a succession of gulfs, bays, and inlets; the most notable of these are the Gulf of Corinth, projecting eastward from the Ionian Sea, and the Gulf of Aigina (Ægina), extending northwestward, the two being separated by the narrow Isthmus of Corinth, only 3½ miles in width; a ship canal, opened in 1893, across the isthmus now unites the gulfs.

Climate, Flora, and Fauna. The Kingdom of Greece, owing to the contrast between mountains and plains, woodlands and sterile valleys, and to the extended contact of land and sea, has a variety of climate possessed by few countries even of much greater area. While the diversities of surface affect the temperature of isolated localities only, it is true that the differences of climate between the north and the south are more marked than in any other country of Europe of similar range of latitude. The mean annual temperature of Greece is 64°; the coldest months are January and February and the warmest are July and August. In the warmer portions of the country vines and olives bud in March, when the almond is in bloom. While snow seldom falls at Athens, the winters are severe on the table-lands and in some of the sheltered plains of the interior. Peasants who dwell among the mountains of Bœotia, in the same nomarchy as Athens, are sometimes confined to their houses for weeks by snow. Rainfall varies as widely as does the temperature, the precipitation being greater in the western than in the eastern section; which accounts for the verdure of the hills of Elis and the barrenness of the slopes of Argolis and Attica. Throughout certain localities the rain pours into the mountain valleys in torrents, while over others the clouds pass without discharging their humidity. The average annual rainfall at Corfu is 46.5 inches; in the east it is much less, being only sixteen inches at Athens.

Grapes, olives, oranges, melons, pomegranates, and similar fruits flourish up to an altitude of 1,500 feet; succeeding this is a zone in which the oak is the characteristic feature; higher still the beech and the pine are found; and above 5,000 feet is a subalpine region where only a sparse vegetation occurs.

In the more densely forested areas are found the wolf, fox, and jackal, while the chamois still haunts the recesses of the Northern Pindus and the Œta mountains. The wild boar, once common, has become extinct, and the lion, mentioned by Aristotle, has not been known in Greece for 2,000 years. The mountain-goat, that has disappeared from other parts of Europe, still has its habitat in some of the islands of the Greek Archipelago. Game, consisting of the red and fallow deer, roe, hare, and rabbit, is abundant. Of the birds, the eagle, vulture, hawk, owl, hoopoe, egret, pelican, pheasant, bustard, partridge, quail, woodcock, and nightingale are most frequently met with.

THE TOWER OF THE WINDS, ATHENS

In the last century before the Christian era, Andronicus of Kyrros built the so-called Tower of the Winds, which accommodated a water-clock, a sun-dial, and a weather-cock.

Resources and Industries. Agriculture, in which the majority of the inland population is engaged, progresses slowly and the products are insufficient to support the population. Scarcely more than one-fifth of the total area is cultivated; the tilled acres being devoted to cereals, cotton, tobacco, the vine, currants, olives, figs, etc. The most favored and best cultivated crop is the currant. Next come, in order of importance, tobacco and the wine product,

THE VALE OF TEMPE, THESSALY

The Vale of Tempe, now Lykostomo, is a narrow defile between the precipitous sides of Mount Ossa and Mount Olympus, through which the tempestuous Peneios rushes to the Gulf of Salonica. From the earliest times the valley has been famed for the beauty of its scenery.

also olives and figs. Silk culture is important only in Messenia. The important minerals produced are manganese iron, hematite, and zinc ore, besides a quantity of lead. The marbles of Paros and of Mount Pentelikon (Pentelicus) are celebrated. The manufactures of Greece are unimportant. Shipbuilding is a prosperous industry, and at Vytina is a Government school of wood-carving. The principal imports are cereals, yarn of woven stuffs, wood and timber, coal, hides, and fish; the chief exports are currants, ores, wines, tobacco, olive-oil, figs, silk and cocoons, gallnuts, cognac, and sponges.

The Greeks do not maintain themselves by either agriculture, mining, or manufacturing, nor by all of these combined, but largely by their merchant marine. The sea-going fleet is important and carries on a large and prosperous trade throughout the Mediterranean and Black seas; in addition, many vessels owned by Greeks sail under the Turkish flag.

Constitution and Government. The Kingdom of Greece is a hereditary constitutional monarchy, descending by primogeniture from male to male, female succession being allowed only in the event of absolute failure of legitimate male heirs. The title of the sovereign is King of the Hellenes. The executive power is vested in the King, who is personally irresponsible and rules by ministers chosen by himself and responsible to the Bulé, in the deliberations of which they take part. The whole legislative power is vested in a single chamber called the Bulé, consisting of about 207 representatives elected by manhood suffrage for a term of four years. Representatives must be at least thirty years of age and electors twenty-one. No bill can become a law without the support of an absolute majority of the Bulé.

Historical. The ancient Greeks called themselves Hellenes, and their country, which had no definite geographical limits, Hellas. Where the Hellenic colonists settled and the Hellenic speech prevailed, there was Hellas. That they were intellectually a highly gifted race can not be questioned, and such a people, located in such a country as Greece must have been when originally occupied by the Hellenes, and such as it became in the commerce, trade, and growth of Southern Europe, could not fail to possess characteristics and qualities that left an indelible impress of energy and refinement upon every race with which they came in contact. As the Greeks increased in numbers they sent colonies to every part of the then known world, until their merchants and sailors controlled to a great extent the trade of the Mediterranean Sea. As the people spread from the Ægean Islands over Continental Greece they became separated into tribes—Æolians, Dorians, Ionians, and Achæi. Their aggressive energy ushered in what is known as the Heroic period of Greek History, which began about 1400 B. C. and lasted a little more than 200 years, or until 1183 B. C., the year of the taking of Troy. Little is known of that period that is reliable, the authentic history of Greece beginning with the first recorded Olympiad, 776 B. C. About the year 500 B. C. the Greek colonists at Miletus in Asia Minor revolted against Darius, King of Persia. Athens assisted the Milesians, thereby incurring the anger of the Persian King, who sought in revenge to subdue Greece. This war is world renowned for the battle of Marathon, the heroic defense of Thermopylæ, and the final victories of Salamis and Platea (481 B. C.). Greece in this era became a mighty power with the Athenians at its head, a supremacy that continued until 404 B. C. In the age of Pericles ending 430 B. C. Athens attained its highest position in art and literature. After the humiliating defeat of the Athenians in the Peloponnesian War, Sparta became the dominant power in Greece. In rapid succession followed a series of wars between the different Greek States covering the period from 399 B. C. to 362 B. C. The battle of Chæronea (338 B. C.), in which the Athenians and Thebans were defeated by Philip of Macedon, subjected Greece to Macedonia, and soon after the capture of Corinth (146 B. C.) it became a province of the Roman Empire.

For nearly two centuries after the accession of Augustus Cæsar, 27 B. C., Greece enjoyed comparative tranquillity, during which Christianity was introduced and spread among the people; churches were founded and many devoted Greeks gave themselves to the work of propagating the new religion at home and abroad. In the succeeding centuries the country was invaded by the Goths and other barbarian hordes from the North who brought great distress to the people. Upon the division of his empire by Constantine, Greece was attached to the eastern section. When in 1204–05 the Venetians and Crusaders overcame the weak power of the Eastern Empire, Greece was divided among the "Latin emperors." The Ottoman Turks, who came to Europe in 1355, conquered Thrace, Macedonia, and Thessaly, with other parts of the peninsula, and in 1453 took Constantinople, bringing Greece under Mohammedan dominion. For nearly 370 years the country suffered from the ignorance, brutality, tyranny, and greed of its oppressors. In 1821 the people rebelled and, after a war in which they had the sympathy of all Christian Europe, succeeded (1829) in gaining their independence and in establishing (1832) the Kingdom of Greece. In 1832 Otho, second son of the King of Bavaria, was elected sovereign by the guiding influence of the three powers of Great Britain, France, and Russia; his reign was not a successful one and he was banished in 1862. Under the same protecting powers the present King, Georgios I., son of Christian IX., of Denmark, became ruler in 1863. In 1881 Greece was increased to its present area by the addition of most of Thessaly and a portion of Epirus, obtained from Turkey by a treaty executed under pressure of the great powers. In 1897 Greece espoused the cause of the revolutionists in Crete, a Turkish island in the Mediterranean, and war with Turkey ensued in which the Greeks were defeated.

ATHENS, FROM THE ACROPOLIS

The classic history of Athens clusters about the Acropolis, and the southern slope toward the Piræus and the Bay of Phaleron. It was only in the second century A. D. that the quarter shown in the picture, or Novae Athenae, as it was called, extending north to the Lykabettós, began to be built up. When Athens was chosen as the capital of reorganized Greece in 1834, even this had dwindled to a wretched cluster of huts. Now, however, the modern buildings and broad streets are no disgrace to the beautiful ruins of the older days of Athens' prime.

Cities of Greece. Athens, the capital and most populous city of Greece, is situated about five miles from its seaport, Piræus, on the Gulf of Aigina in the province of Attica. According to tradition it

was founded by an Egyptian colony led by Cecrops about 1550 B. C. Athens, now one of the most beautiful and regularly built cities in the Levant, in 1834, when the seat of government was removed hither from Nauplia, was an insignificant town with narrow, crooked streets and only a few hundred houses. The important edifices of the ancient city were grouped on and near the Acropolis. The Parthenon, exquisite in proportion and molding, was the highest achievement in Greek architecture; the Erechtheum, the Theseum, and the Propylæa were also erected on that hill; on the slope of the Acropolis was the theater of Dionysus, where the Greek dramas of Æschylus, Sophocles, Euripides, and Aristophanes were produced. Two massive fortification walls extending from the ramparts of Athens to those of Piræus, once destroyed, were rebuilt 393 B. C. In the modern city of Athens are the Royal Palace, the University buildings, the Academy of Science built of Pentelic marble, and the National Archæological Museum. Piræus is the seaport of Athens and the second city of the kingdom. It was founded by Themistocles and Pericles, and was destroyed by Sulla, 86 B. C. The city has been rebuilt since the beginning of the last century and is connected with Athens by a railway.

THE PALAESTRA, OLYMPIA

Olympia, in a beautiful valley in the Peloponnesus, is famous as the locality where the Olympic games were periodically celebrated by the Greeks for the duration of a thousand years. The ruins of the Palaestra, or Gymnasium, where the contestants were trained for the great event, are still standing. It was about seventy yards square, and enclosed a large court with the usual colonnade of Doric columns. North of the Palaestra was the main gymnasium, or open air exercise grounds.

THE ERECHTHEUM, ATHENS

This shrine, a unique departure from the typical Ionic temple architecture, dates from the time of Pericles. It was dedicated to the tutelary deities of Athens and marks the site where Athenê and Poseidon decided on the joint guardianship of the city.

Patras, the capital of the nomarchy of Achaia and Elis, is an important seaport situated on the eastern shore of the Gulf of Patras. The city, which as early as 31 B. C. was distinguished for its industrial activity, is one of the chief commercial cities of Greece and the terminus of a railway extending from Corinth and of another from Pyrgos. Its commerce, chiefly connected with the export of currants and wine, constitutes 30 per cent of the total for the kingdom. It is the point at which the Greek revolutionists raised their standard in 1821 and was nearly destroyed then by the Turks.

Trikkala, capital of the nomarchy or province of the same name, lies near the Turkish frontier. It has an extensive trade in corn, tobacco, and silkworm cocoons.

Corfu is an important seaport and the capital of the island of Corfu. The principal structures are the Royal Palace, the Cathedral, numerous richly decorated Greek and Roman Catholic churches, the arsenal, the military hospital, a museum, and an aqueduct. The city is the see of a Greek and a Latin archbishop and the summer residence of the King of Greece and his court. Corfu exports olive-oil and imports grain and manufactured articles.

Education. Considerable attention has been given within the last few years to the advancement of public instruction, and the Greeks are now the best educated people in the Balkan States. The law, however, requiring all children between the ages of five and twelve years to attend school is indifferently enforced, especially in the rural districts. A trade and industrial academy at Piræus with forty teachers affords instruction in the industries relating to wine, spirits, beer, soap, perfumes, dairying, cattle-breeding, and silkworm-raising, and in the duties of commercial clerks. The State University is at Athens. The Government has recently opened trade schools at Athens and at Patras. Painting, sculpture, and mechanics are taught at the Polytechnicum Mezzovion. From a linguistic point of view, at least, the nationality of Greece is Hellenic, and through the efforts of the educated classes, modern Greek, the language most widely spoken throughout all parts of the country, is being approximated more and more to the Greek of classic times.

THE ACROPOLIS, ATHENS

The Acropolis or citadel of Athens, a precipitous rock more than 260 feet high, is famous for the magnificent buildings that crowned its summit. These buildings commanded the admiration of the world for ages, and reveal, even in their ruins, the wonders and the glorious achievement of Grecian art. The Parthenon, the imposing temple of Pericles, dedicated to the goddess Athenê, occupied the culminating point of the Acropolis. Many of the matchless columns and friezes of this inimitable shrine still remain.

SWEDEN AND NORWAY

SWEDEN AND NORWAY, once united as a dual monarchy, but now separate kingdoms, occupy the whole of the Scandinavian Peninsula. This, the largest peninsula in Europe, extends from 55° 20′ to 71° 11′ N. lat., trending diagonally between 4° 30′ E. long. at the south and 31° 12′ at the north. In breadth the peninsula varies from 230 to 470 miles; its greatest length is 1,160 miles and its area 297,321 square miles.

OSCAR II.

The aged ruler of Sweden, King Oscar II, has had a long reign marked by peace and material progress on every hand, but embittered recently by the defection of Norway from its union with Sweden.

The peninsula comprises a vast plateau traversed by mountain ranges rising occasionally to elevations exceeding 8,000 feet in height. On the west the plateau descends abruptly to the deeply indented coast; on the east it slopes gradually to the Baltic Sea. The main ridge of the mountain-plateau, extending from 69° to 63° N. lat., divides the Scandinavian Peninsula into two unequal parts, separating the streams of the eastern section, occupied by the Kingdom of Sweden, from those of the western portion, which constitutes the Kingdom of Norway. Near the Russian frontier the altitude seldom exceeds 1,000 feet, but toward the southwest the elevation increases, attaining in Sulitjelma near 67° N. lat. a height of 6,178 feet above sea-level. Farther south, in about 63° N. lat., the range separates, the main ridge continuing southward while the branch diverges toward the west In the Jötun-Fjeld, an elevated table-land of the south, the peninsula attains its greatest altitude in Galdhöpigen, which rises 8,540 feet above sea-level. The mountains of Scandinavia bear numerous snow-fields and glaciers, while many of the highest peaks are snow-capped throughout the year. Here also are the sources of many rivers that, owing to the abruptness of descent, are precipitous torrents, often obstructed by cataracts and rapids.

SWEDEN

Physiography. Of the total area of the peninsula, the Kingdom of Sweden embraces an area of 173,968 square miles; the extreme length of the country from north to south is 986 miles, while its greatest breadth is less than 200 miles.

The coast-line of Sweden, about 1,600 miles in length, is not broken by so many nor such deep fiords as is that of Norway, but except along the coast in the southern extremity of the country the mainland is girdled by a belt of small islands, holms, and skerries, more or less thickly set, that forms the so-called "Skärgård" (fence of skerries) or outer coast. Between these islands and the mainland extends a connected series of sounds of great importance to navigation. The broadest section of this skärgård is off Stockholm and reaches many miles out into the Baltic Sea, making the entrance to the harbor one of the most curious and picturesque in the world. A similar but not so extensive skärgård exists off Karlskrona (Carlscrona), near the southern end of the peninsula. On the coast of the Kattegat the skärgård extends from Svinesund to Halmstad but, unlike those of the Baltic, the islands and coast are rocky and almost bare of vegetation and trees. The islands connected with the kingdom comprise an area of about 3,000 square miles. As is natural from the great number of its long and deep fiords and bays, Sweden is well supplied with excellent harbors, but those upon the Gulf of Bothnia are frequently blocked with ice for six months of the year.

The Kjölen, which forms about two-thirds of the western frontier, are the only mountains of Sweden worthy of note. The greatest elevations within Swedish territory are the peaks of Kebnekaisse and Sarjektjåkko, which attain an altitude of 7,192 and 6,970 feet, respectively; farther south in the province of Jemtland is the isolated peak of Äreskutan, 4,919 feet in height. The low spurs in the southeast known as the Tiveden separate Lakes Wener and Wetter and extending farther east intersect some of the southern provinces, forming the plateau of Småland south of Lake Wetter.

The greater portion of the country consists of low granite hills covered with forests of pine and fir, but throughout the whole extent of Sweden fertile plains are not infrequent. Unfortunately these are most extensive in the northeastern section along the Gulf of Bothnia, where the climate is too rigorous to permit of successful agriculture. Fertile plains are found, however, in the vicinity of Lakes Mälar and Hjelmar, the farming districts of Östergötland, between Lake Wetter and the Baltic; in the entire district between

PALACE OF DROTTNINGHOLM, NEAR STOCKHOLM

In the beautiful so-called Lake Mälar, southwest of Stockholm, lies the island of Drottningholm, or "Queen's Island," which derives its name from the queen of John III., who in the latter part of the 16th century built a palace here. The present great building, however, dates from the 17th century, and has become the royal summer palace. King Oscar II. spends his summers at Drottningholm.

ST. CATHERINE'S CHURCH, WISBY

In the 13th century, Wisby, on the island of Gothland, was mistress of the great Asiatic trade route through Novgorod to Asia. Of the fourteen churches built in those days of prosperity, all but one are in ruins. These ruins, however, have been carefully preserved, and St. Catherine's even now retains its solemn Gothic beauty.

Lakes Wener and Wetter, as far as Gothenburg; and in the two districts of Christianstad and Malmöhus in the extreme south.

Rivers and Lakes. The rivers (elfs) are longer than those of Norway, owing to the westerly location of the great divide or watershed of the peninsula. Their general trend is southeasterly; the important streams beginning on the north are the Torneå, forming part of the boundary between Sweden and Russia; Kalix, which near its source broadens out into the lakes of Paitas and Kalix; Luleå, formed by the union of the Stora Luleå and the Lilla Luleå; Piteå-elf, with the Lake of Tjäggelvas; and the Skellefteå, Umeå, Indals-Elf, Ljungan, Ljusne, and Dal-Elf. Many of the streams of Sweden are, in their eastern course, a series of lakes connected by rapids or waterfalls. One of the largest waterfalls in Europe is in the northern part of Sweden, Njuommelsaska or Harsprånget, which has a fall of 100 feet at the upper end and another of 150 feet in the course of a mile and a quarter. Other notable falls are Adna-Muorki-Kortje, Tännfors, and Trollhättan. The very large number of lakes, many of them the mere expansions of river-beds, form a striking feature of the country; nearly one-twelfth of the surface, or about 13,900 square miles of the total area, is covered with water. While the average proportion of Europe occupied by lakes is about 0.5 per cent of the area, that of Sweden is 8 per cent. Lake Wener, the largest, with an area of 2,100 square miles, is the third lake in size in Europe. Projecting westward from Stockholm about seventy miles is the great Mälar Fjord, classed as one of the lakes of Sweden; adjacent to its entrance into the Baltic are several extensive islands, the more important being North and South Ljusterö, Warmdö, Ornö, and Utö, the last containing valuable mines of iron ore. Lake Mälar is also studded with islands.

NATIONAL MUSEUM AND GRAND HOTEL, STOCKHOLM, SWEDEN

Stockholm, the capital of Sweden, situated at the east end of Lake Mälar, is built partly on islands, and intersected by canals. Among its many fine buildings is the National Museum, at the south end of Blasieholme, containing historical collections of various kinds.

The geological formations of Sweden consist mainly of granites, gneiss, and metamorphic rocks, broken through and overflowed by trap, the surface, except on the mountains, being covered with the drift formation and large boulders. Traces of glacial action are abundant. In the mountains metals abound—iron, copper, zinc, lead, silver, and others. Swedish iron is not excelled by any in the world.

Climate, Flora, and Fauna. The climate of Sweden is exceedingly variable. This is due to the peculiarity of its situation, between the maritime climate of Norway, which is modified by the waters and the currents of the Atlantic Ocean, and the rigorous continental climate of Russia. Lapland and the western section of Sweden have a marked continental climate and the same may be said of the section south of Lake Wetter, while along the Baltic Sea and Kattegat climatic conditions are decidedly maritime. At Stockholm the mean annual temperature is 41.4°, that for January is 26.1°, and for July, 61.4°. The highest annual average, 44.9°, is at Lund. The greatest cold is experienced at Jockmock in Northern Sweden, northwest of Piteå. The heaviest rainfall is on the Kattegat coast, the average precipitation at Gothenburg being 32.56 inches. From this point precipitation diminishes both south and northwest, being 12.75 inches at Kalmar (Calmar). The rainfall is greatest during July and August; there are heavy falls of snow in the winter months.

Vegetation consists chiefly of forests, which cover 40 per cent of the entire land surface, stunted shrubs, and arctic forms of low growth. In Northern Sweden the fir and pine are most common; south of the Dal-Elf, the oak; and in the southern and southwestern sections, the beech. In some localities there are considerable forests of birch.

Among the beasts of prey are bears and wolves, found almost exclusively in the mountainous regions, and the lynx and glutton, seen only occasionally. The reindeer, red deer, and elk are characteristic and valuable animals. The lemming, a quadruped resembling a water-rat, the northern hare, hedgehog, and dormouse are common in certain

RIDDARHOLMS-KYRKA, STOCKHOLM

This church on the island of Riddar has been, since the time of Gustavus Adolphus, the place of burial for the kings and illustrious men of Sweden.

sections. Of the wild-fowl the finest is the capercaillie or wood-grouse; next in importance are the ptarmigan, black grouse, and hazel-grouse. The most valuable of the wild-fowl is the eider-duck, the down from which forms an important item of commerce.

Resources and Industries. Agriculture is the principal occupation of the people, although the greater part of the country is not capable of cultivation.

Lakes, rivers, rocks, and glaciers cover vast areas, while the climate of the northern provinces is too severe to permit of agriculture except in the most favored localities. Of the total area only 8.6 per cent is under cultivation, and 3.5 per cent under meadows, yet agricultural pursuits are carried on nowhere more intelligently than in Sweden. The provinces of Scania, Halland, Gothland, the Baltic Islands, and the coast of Småland are the most fertile regions. In the 18th century Sweden was obliged to import most of the cereals used, but the country now produces more of certain grains than is required for home consumption.

The chief mineral products are iron, lead, silver, tin, copper, and zinc. Swedish iron is famous for its purity. Immense deposits of exceedingly rich iron ore exist at Gellivara in Lapland. Considerable deposits of coal occur in the south. As to manufactures, the wood-working industry is by far the most important, the iron and machinery manufactures ranking second; there are also several hundred establishments for the making of textile fabrics. The chief imports are minerals, machines, textile manufactures, food-stuffs, raw textile materials, and yarn and skins and hides. The principal exports are timber, live animals, metals and minerals, and paper and paper manufactures.

GOTHENBURG, EAST HARBOR

The busy and flourishing commercial city of Gothenburg (Göteborg), near the mouth of the Göta River, has an excellent harbor and many canals, by which boats can reach all parts of the business center of the town. Founded in 1618, by Dutch colonists, the great continental blockades of Napoleon formed the beginning of its present commercial importance.

Historical. Sweden and Norway were inhabited in early times by the ancestors of the Lapps and Finns, who now occupy the extreme northern portions of the country. They were gradually driven from their homes by another and a stronger race, that of the tall, blue-eyed, fair-haired Scandinavians, the earliest traces of whom are found on the Danish Baltic coast. The central locality, from which the Gothic migrations spread, included Scania or extreme Southern Sweden and the opposite portion of the Island of Seeland. The little town of Skanör, upon the southwesternmost point of Sweden, buried in sand, with the most venerable church on the great Scandinavian Peninsula, is also a witness to the origin of the name by which this country and its people have become known. In a remote era, a mighty people founded the city of Odense (Odin's sanctuary) upon the Danish island of Fyen, passed on to the next island and the mainland, and established a great capital at the present dilapidated hamlet of Sigtuna, near Stockholm. But, from the very earliest historical times, the seat of the Gothic dominion, which extended over Jutland, Southern Sweden, and neighboring islands, was Lejre, a city in Seeland, not far from the present town of Röskilde. The Swedes are mentioned in the early Christian era as a people distinct from yet akin to the Goths. As a nation, they are found rallying around a powerful king, who had established his capital at Upsala ("the lofty halls"), now the most noted university town in Sweden, situated northwest of Stockholm. Speaking more accurately, the ancient Upsala was three miles northeast of the present town, and its glories are now represented by the Tumuli of the Kings and the Royal Hill from which the monarchs addressed their subjects. In the 13th century the kings transferred their capital to Stockholm and the archiepiscopal see to the present site of Upsala.

GIRLS OF BLEKINGE

The province of Blekinge, in South Sweden, with its fertile meadows, well-tilled fields, and beautiful flower-bordered lakes, is known as the Garden of Sweden.

The authentic history of Sweden does not fairly begin until about the close of the 9th century, at which time the country was engaged in constant warfare with the Danes and Norwegians. It was not until about the year 1000 that King Olaf, the first of its rulers who embraced Christianity, was baptized, and nearly a century elapsed before heathenism finally gave way to the new religion. In 1160 King Eric the Saint was defeated and murdered by a Danish prince. Two hundred years of civil and foreign wars followed, which were terminated by the offer of the throne by the Swedish nobles to Margaret, Queen of Denmark and Norway. She defeated the Swedish King and by the Union of Kalmar in 1397 brought the three Scandinavian countries under one scepter. This union lasted until 1523, when the Swedes, dissatisfied with the despotic manner in which they were ruled by the Danish monarchs, revolted, and chose Gustavus I. as their King. During his reign Lutheranism was firmly established as the State religion.

Under Gustavus II., a grandson of Gustavus I., the northern kingdom became a great power. Throughout his reign the hostilities between the rival kingdoms were almost incessant. In 1655 the brilliant Charles X. ascended the throne. He besieged Copenhagen and obtained a free passage through The Sound and forced the Danes to give up to him the provinces of Scania, Halland, and Blekinge, in Southern Sweden. Charles XII., often called the "Madman of the North," made war against Denmark, Poland, and Russia,

FALL OF TOPPÖ, AT TROLLHÄTTAN

The Trollhättan Falls are really cascades formed by rocky islands and ledges obstructing for nearly a mile the channel of the Göta River. The great volume of the water and the flying spray make, however, a very impressive spectacle, especially at the Fall of Toppö, the highest of the series of falls.

SCENES ON THE EASTERN GOTA CANAL. 1. NEAR MOTALA. 2. AT BERG

These views show scenes on the Eastern Göta Canal, which connects Lake Wetter with the Baltic Sea, and forms part of the great waterway across Southern Sweden. A short distance from Lake Wetter this canal descends by five locks to Lake Boren. At Berg another chain of locks leads to Lake Roxen.

Successful at first in his wars with the latter country, he was finally defeated by Peter the Great near Poltava in 1709 and took refuge in Turkey. After his death, which occurred in 1718, Sweden lost its possessions on the southern shores of the Baltic, and also Finland and Bothnia. In 1810 the Swedish Diet elected Bernadotte, one of Napoleon's marshals, Crown Prince, the King being without heirs.

The disruption of relations between Denmark and Norway, as a result of the Kiel Treaty of 1814, revived the idea of a union of the two peninsular kingdoms. Norway had established a government independent of Denmark, but was induced by the great powers to agree to a union with Sweden, and Bernadotte succeeded peaceably to the throne of both kingdoms as Charles XIV. in 1818.

Oscar I, second king of the new dynasty, succeeded in 1844, and ruled until 1859. During his reign popular demands for parliamentary reforms were held in check, but Charles XV, his successor, yielded to the people in 1866. Under Oscar II, who succeeded to the crown in 1872, the union of Sweden with Norway was broken in 1905 by the secession of the latter kingdom.

Government. The fundamental laws of Sweden are the constitution of 1809, which established a representative monarchy as the government of the State, and the amended regulations of 1866 for the formation of the Diet. The executive power of the state is vested by these instruments in the person of the King who is assisted by a Council of State. The Council consists of eleven members, eight of whom are ministerial heads of departments, and three without portfolios. All administrative matters are submitted to the King in council. The treaty-making power is one of the prerogatives of the King, and he possesses a veto upon the laws passed by the national legislative body. The Diet, or Parliament, of Sweden consists of two chambers, the members of which are elected by the people. The First Chamber is composed of 150 members, each above thirty-five years of age, who must have certain property qualifications. The Second Chamber comprises 230 members, eighty of whom are elected by the towns and 150 by the rural districts.

Swedish Cities. Stockholm, the capital and commercial metropolis of the Kingdom of Sweden, is situated between Lake Mälar and an inlet of the Baltic Sea. The harbor is an excellent one, although it is liable to be frozen over for four or five months in winter. The city, one of the most attractive in Europe, picturesquely situated on islands and mainland, and surrounded by water in almost every direction, is often spoken of as the "Venice of the North." Stadern, the old town, is on an island of the same name at the mouth of Lake Mälar and is connected with the north suburb of the city by the Norrbro Bridge, completed in 1797. At the southeastern end of the bridge and at the northern end of the island is the Royal Palace. The palace contains a Museum of Armor and Costumes, one of the most celebrated collections of its kind known. Other notable buildings and objects of interest are the Storkyrka (Great Church), founded in 1264; the Stor-Torg (Great Market); the statue of Gustavus Vasa; the Riddarholms-Kyrka, the burial-place of the Swedish kings and heroes since the time of Gustavus Adolphus; and fine statues of Charles XII. and Charles XIII.

Gothenburg, a thriving commercial city, is situated in an extensive plain on the left bank of the broad Göta-elf, about five miles from its mouth. It has an excellent and capacious harbor which is rarely obstructed with ice. The city was founded in 1619, on the invitation of Gustavus Adolphus, by Dutch settlers, who brought with them their national customs in the construction of streets and canals. Gothenburg originated a system of dealing with the liquor traffic that has attracted widespread attention. The notable buildings and other objects of interest are the Exchange; the Town Hall, built in 1670; the statue of Gustavus Adolphus, the founder of the city; the two chief canals, and the picture gallery. The staple manufactures are iron, steel, machinery, cotton goods, beer, and sugar. The shipbuilding industry is large and important.

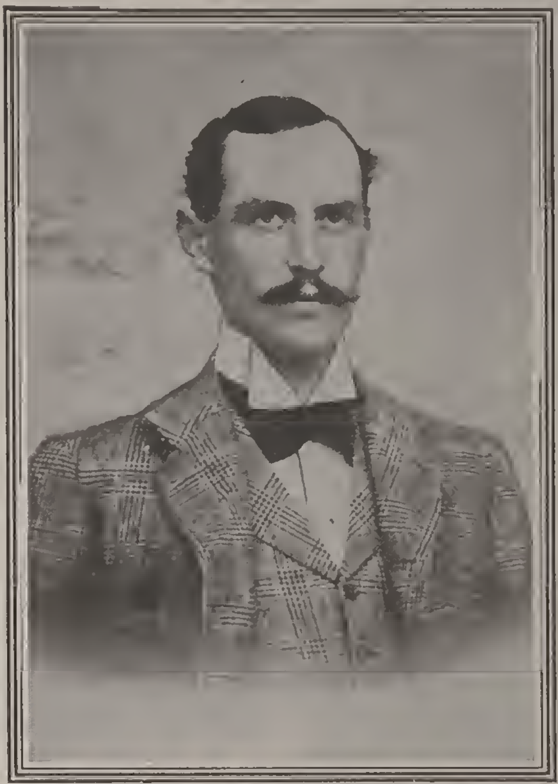
LAPP FAMILY

The mountain Lapps of Sweden, Norway, and Finland are a wandering tribe, camping in summer on the seashore or high up in the mountains, and seeking in winter some more sheltered spot. They are herders and fishermen, living upon flesh and reindeer milk.

Malmö, a prosperous seaport, is situated on The Sound opposite Copenhagen, from which it is distant about sixteen miles. The Custom-House, the Great Market, the large bronze equestrian statue of

Charles X, the Town Hall, and the Malmöhus, a fortress dating from 1537, are objects of interest. It has important manufactures of gloves, cotton goods, and tobacco, and carries on shipbuilding.

Education—Population. In 1898 among the army recruits only 0.08 per cent were illiterate and only 0.37 per cent were unable to write. The kingdom has two universities, located at Upsala and Lund, respectively; the former was founded in 1477. There are also a State faculty of medicine at Stockholm and private philosophical faculties at Stockholm and Gothenburg. Public elementary education is free and compulsory, and children not receiving government education must furnish proof of being privately instructed. The population of Sweden, by the census of 1900, was 5,136,441.



THE KING OF NORWAY

By vote of the Norwegian Storthing on Nov. 18, 1905, the crown was conferred upon King Haakon VII. As grandson of a Danish king he represents the former line of Danish rulers over Norway, while he is also grandson of Charles XV of the Swedish line.

NORWAY

Physiography. Norway occupies the western portion of the Scandinavian Peninsula, between 57° 58′ and 71° 11′ N. lat. and 4° 30′ and 31° 12′ E. long. Its area is 125,593 square miles, the area of the islands being 8,460 square miles. The length of the coast-line, exclusive of fjords and bays, is 3,018 miles. The shore is generally bold and abrupt and skirted with islands in the greatest profusion. The view of the coast as presented from the sea is one of marvelous beauty, the dark mountains with their snowy crests and white terraces blending with the clouds or standing boldly out against the blue sky and forming a panorama of surpassing grandeur and sublimity.

HOUSE OF PARLIAMENT, CHRISTIANIA

The Storthings-Bygning, or Norwegian house of parliament, is a handsome, modern building, completed in 1866, containing separate chambers—the Storthings-Sal, with a seating capacity of 114, and the Lagthings-Sal, with seats for forty members—for the two branches of the legislature. The principal façade overlooks the Eidsvolds-Plads, a handsome square beautifully adorned with trees.

The insular belt skirting the coast is known in Norway, as in Sweden, by the name of Skärgård. Between the islands and the mainland extends a connected series of sounds—"leder," or roads, as they are called—that furnish sheltered passages for vessels along the entire Atlantic and Arctic coasts. Through some of the inter-island passages the currents move with marvelous velocity, and at certain stages of the tides they are exceedingly hazardous to navigation. A notable instance of this is found in the Maelström, a whirlpool off the northwestern coast southwest of Moskenäsö, one of the Lofoten (Lofoden) Islands. When the wind is northwest and opposed to the tide, the Maelström attains its greatest fury and becomes exceedingly dangerous.

Among the more important inlets indenting the coast is Christiania Fjord, ninety miles long, upon which is situated Christiania, the Norwegian capital. The Bukke (Bukn) Fjord is a large bay in the southwest sending off branches, the principal ones being Stavanger and Lyse, the latter widely celebrated for its narrowness and its lofty, precipitous cliffs. Between Stavanger and Bergen is Hardanger Fjord, projecting northeastward about eighty miles and sending off long ramifications, the most interesting being Sör Fjord. At the sixty-first parallel is Sogne Fjord, in many respects the most remarkable of the inlets of Norway. It extends inland for more than 100 miles and is everywhere inclosed by rocky, precipitous walls that sometimes rise to a sheer height of 5,000 feet.

Mountains and Rivers. Norway is one of the most mountainous countries in Europe, more than one-half of the surface being over 1,000 feet above sea-level. It consists of detached plateaus and mountain masses cut by deep inlets of the sea. The table-lands comprise two groups, the Kjölen Mountains, which lie nearly parallel to the coast and extend from Finmark to the Trondhjem Plateau, and the Dovrefjeld and other ranges on the south, which descend toward the coast. The mountain masses converge toward the southwest until they form the commencement of the Kjölen Range. In this chain is specially conspicuous the ice-clad tract of Sulitjelma (6,178 feet), lying east of the Salten Fjord. The mountains trending westward, under the title of Dovrefjeld, rise in the southwest to the highest altitudes in Norway, culminating in Galdhöpigen (8,540 feet). The perpetual snow-line is at about 5,150 feet elevation on the Dovrefjeld, but descends to a few hundred feet at the North Cape. Around the Jostedalsbrä, in North Bergenhus, are the largest and best known glaciers in Norway. The position of these mountain masses leaves little space for plains, and the level districts of Norway are limited in extent. The more typical topography is that of great valleys, which in the west merge into fjords.

As a rule the rivers of the kingdom are short and rapid. The Glommen is the largest river of the Scandinavian Peninsula and discharges into the Christiania Fjord after a course of 350 miles. It is obstructed by numerous falls, the most notable of which, the Sarpsfos, has an immense volume of water plunging over a descent of seventy feet. The Voringfos Cascade, near Bergen, descends at one leap 470 feet, while the celebrated Rjukan-Fos in Talemark has a vertical fall of 805 feet. As in Sweden, lakes are numerous, and many of them are

CATHEDRAL AT TRONDHJEM

Trondhjem was the center of government long before the days of St. Olaf, its traditionary founder, whose fame has been perpetuated by the great Cathedral built in his honor by King Olaf Kyrre. This church, which has been repeatedly injured by fire, has been carefully restored, so that it is still the noblest cathedral in Norway.

TROMSÖ

Tromsö, a commercial town and fishing port on an island of the same name, on the north coast, lies in one of the most mountainous districts of Norway. The island is interesting for its natural beauty and for its encampment of Lapps. Whaling expeditions leave the island annually.

exceedingly interesting, owing to their high elevation. Miösen (Mjosen), the largest, has a depth of 1,480 feet, the bottom being more than 1,000 feet below the level of the North Sea. Of the elevated lakes the most wonderful is Bygdin, from fifteen to twenty miles in length with an altitude of 3,490 feet above the sea.

The geological formations of Norway are chiefly primitive and transition rocks. Of these gneiss is the most abundant, alternating in some places with granite, and mixed with mica slate. The mountains are rich in iron, copper, silver, nickel, and other metals, but the mines are very imperfectly worked because of government restrictions and scarcity of fuel.

TORGHATTEN

From the island of Torgen, off the wonderful west coast of Norway, rises the curious hill called Torghatten, which resembles an enormous market hat floating on the water. Piercing the center of the island is a huge natural tunnel more than 500 feet long, through which a marvelous view of the sea with its countless islands and rocks may be obtained.

Climate, Flora, and Fauna. The climate of Norway, which is dry and healthful, is much milder on the western coast than in the uplands of the interior. The waters, confined in a measure, in the deep fiords and bays along the coast become warmed to their greatest depths by the ocean currents, the result being that the lower waters of these large basins have a much higher temperature, even in January, than that of the air at the surface; hence while the fiords and harbors of Sweden, on the Baltic Sea and Gulf of Bothnia, are ice-locked for five or six months of the year, those on the coast of Norway never freeze. In the interior of Southern Norway and Finmark the winters are longest, lasting for 200 days; the mean annual temperature here is below 32°. Along the outermost coast-line, from Romsdal to Jæderen the mercury never falls below 12°, but at Karasjok –58° has been reported. The highest recorded temperatures are 90° observed at Christiania and 96° in Finmark near Varanger Fjord. The warm winds supply an abundant rainfall which is unevenly distributed. On the western coast at the North Cape and in the Lofoten Islands precipitation occurs on 200 days in the year. On the coasts the annual rainfall varies between forty and seventy-five inches, but at Christiania it is only twenty-six inches; in the interior it ranges between twelve and sixteen inches.

FISH MARKET, BERGEN

Bergen, on the west coast, one of the oldest and most picturesque towns in Norway, is a thriving modern city with a commerce, chiefly in fish, dating back to the time of the Hanseatic League in the 15th century. It is the greatest fish mart in Norway and is a place of exchange and export for all the northern fisheries.

The flora consists chiefly of forest trees, numerous varieties of berries, and mosses. The principal trees are the pine, fir, and birch, the forests of Bergen and Tromsö being almost exclusively of fir. The birch grows at higher altitudes than the conifers. Other vegetation, like the Ranunculus, the Alpine heather, and many mountain flowering plants, grows luxuriantly. At lower altitudes grow the ash, elm, linden, oak, beech, and black alder.

The bear and the lynx are still encountered in the forests, and less frequently the wolf. In Finmark the reindeer is common and the elk roams the border forests near Trondhjem. The red deer is found in the wooded islands and the roebuck and stag are seen on the islands about Bergen. The hare is common in the northern districts, while the lemming descends in multitudes from the northern plateau to the sea. Feathered game is plentiful in the forests and countless flocks of aquatic birds frequent the rocky shores and islands. The eider-duck, rare in southern fiords, is common on the Finmark Islands and in the Vesteraalen group. The waters of Norway contain a great number and variety of fish.

Resources and Industries. Of the total area of Norway, 75 per cent is unproductive, 22 per cent is forest, and only 3 per cent is under cultivation. The leading crops are oats, barley, rye, wheat, pulse, and potatoes. Norway imports far more agricultural products than it exports. The total forested area is 26,320 square miles, of which 73 per cent consists of pine. Large amounts of timber are exported.

The mining industries are unimportant, the chief mineral products being silver, copper, pyrites, apatite, and feldspar. The fisheries employ a large number of persons, the chief varieties taken being cod, herring, mackerel, salmon, and sea-trout. Other fisheries are whale, walrus, seal, and shark. The chief exports are animal products, including fish, both fresh and preserved; timber and manufactures of wood, and paper and paper manufactures; the leading imports are breadstuffs, groceries, spirits, yarn and rope, textile manufactures, tallow, oils, tar, etc., timber, dyestuffs, vegetable products, minerals and metals, and vessels, carriages, and machinery.

Historical. Toward the end of the 8th century the

Norwegian vikings began their predatory excursions. At first they visited other countries only for plunder, but in the course of time they made permanent settlements. They established themselves in the Shetland and Orkney islands, on the Scottish coasts, and in Ireland. Their own country was governed by a number of petty rulers until about the close of the 9th century. Harold I., surnamed Harfagr (Fair-haired), succeeded in subduing all the jarls or earls and becoming master of Norway. Some of the rebellious chiefs were exiled; some fled from the country rather than submit to any one man's rule. Between 870 and 890 a number of them removed to Iceland, which had been discovered by the Norsemen some years before and was uninhabited except by a few settlers who had gone there from Ireland. To escape the taxation which was necessary to sustain an organized government, many also emigrated to the Orkney, Shetland, and Hebrides islands. While the process of consolidation was progressing the savage warriors roved to the shores of France and founded the Duchy of Normandy. It was over a century before Norway became firmly established as a kingdom; for not only did the exiled chiefs and their descendants return to vex the struggling monarchs, but the Danish King was prone to interfere in the internal affairs of Norway. After about a century of civil strife Olaf the Saint became King and introduced the Christian religion. Canute the Great in 1028 drove Olaf from the kingdom, but after the death of the former Norway was ruled by its own kings until 1319, when King Hakon died. His only child, a daughter, married the King of Sweden and the two countries were united for a time. Magnus, the son of this Norwegian princess, lost Sweden but retained Norway, and his son Hakon married Margaret, the heiress to the Danish throne; thus Denmark and Norway were united until 1814, when the union of Norway and Sweden occurred. The subsequent history of Norway is identified with that of Sweden until 1905 when the union with Sweden was broken by secession and a Danish prince was elected King, taking the title of Hakon VII.

HAMMERFEST

The busy fishing and trading port of Hammerfest, founded in 1787, is the northernmost town of the world.

SVOLVAER, LOFOTEN ISLANDS, NORWAY

The Lofoten Islands, off the west coast of Norway, are famous fishing banks. Svolvaer, a busy fishing station, with guano works, is the most important steamer landing of the group, and not far distant on Ofoten Fjord is the terminus of a railway that extends the farthest north of any road in existence. The Svolvaerjura behind the village shows well the mountainous character of the islands; from its top in summer the midnight sun is visible.

Government. Norway is a constitutional monarchy, the executive power of which is vested in the King, who exercises his functions by the aid of a State Council composed of two Ministers of State and at least seven Councilors, all of whom are citizens of Norway. The legislative functions are delegated to the Storthing or Great Court, an assembly of 114 members, which divides itself into two houses, the Odelsthing, composed of three-fourths of the members of the representative body, and the Lagthing or Senate, of the remaining one-fourth. All bills must be passed by both bodies and sanctioned by the King; in case of disagreement the two houses meet conjointly and form one body in which a majority of two-thirds is required for the adoption of a measure. The Storthing meets annually but can not remain in session for more than two months without royal permission. The members are elected for three years, two-thirds from the boroughs and one-third from the rural districts. The Evangelical Lutheran religion is the national Church and the only one endowed by the State; the head of the Church is the King, who nominates the clergy.

Norway had in 1900 a population of 2,239,880. Three-fourths of the inhabitants reside in rural districts. The leading towns are either on the coast or at the mines; interior villages are almost unknown.

Cities of Norway. Christiania, the capital and largest city in the kingdom, is beautifully situated at the foot of pine-covered hills at the northern end of Christiania Fjord and on the west bank of the Akers Elf (river). The medieval town of Oslo was founded on the east bank of the river by Harold III., surnamed Hardrada, about 1058. In 1547 Oslo was burned by its inhabitants to prevent its falling into the hands of Swedish invaders, was rebuilt and again burned in 1624. In the latter year Christian IV. of Denmark founded the present city,

NORTH CAPE

This promontory is known as the most northern point of Europe, although actually Nordkyn projects beyond it into the Arctic Ocean. Travelers often visit the North Cape in summer to see the midnight sun.

which is the seat of the Norwegian Government, of the supreme law courts, of Parliament, and of a university. It has a considerable trade, its exports being timber, herring, matches, oats, beer, and ice, while its imports are rye, woolen and cotton goods, coal, meat, and machinery. A statue of Christian IV. adorns the market-place. The notable buildings are the Parliament Hall, the University, Museum of Art, and Fortress of Akershus. The palace, erected in 1825–48, is a plain edifice with a classical portico. The environments of Christiania are very beautiful, commanding extensive views of the city and fiord.

Bergen, founded in the last half of the 11th century, is one of the oldest and most picturesque cities in Norway. It is situated on a rugged peninsula and isthmus, and in the background are four low mountains, one of which is 2,100 feet. The location of the city on the western coast gives it a genial

BALHOLM FROM SOGNEFJORD

Balholm, a small village on an arm of Sognefjord, is much frequented by tourists because of the magnificent scenery of the district in which it lies. The Sognefjord, though wanting the fine waterfalls and the charm of the softer scenery of its southern rival, Hardanger, surpasses the latter in the grandeur and impressiveness of its mountains and glaciers.

ON THE ROAD TO ODDE

The scenery all along the famous Hardanger Fjord presents a perpetual contrast between frowning rocks and bits of green valleys where little hamlets nestle. Odde, situated on the Sorfjord, a southern arm of Hardanger, is a picturesque summer resort.

although a humid climate; frosts, even in winter, are rare and light. The Hanseatic Museum and the Bergenhus are worthy of note. The city has fine statues of Christie, president of the first Norwegian Storthing, and of Ludvig Holberg, the poet. The fish-market is the largest and most interesting in the Kingdom of Norway.

Trondhjem, situated on a peninsula formed by the Trondhjem Fjord and the Nid River, is the northernmost of the large towns of Europe. Located in the same latitude as Southern Greenland, its summer climate is like that of the south of England and its winter similar to that of Dresden. Formerly the capital of the kingdom, Trondhjem still remains the religious center and in its Cathedral the Norwegian kings are crowned. This splendid edifice is the finest in Norway; it was begun in the 12th century, and, although repeatedly damaged by fire, was always restored. The falls and rapids near Trondhjem furnish great water-power, which is utilized by several industrial enterprises.

Education. In Norway education is compulsory and free, and is well advanced. The school age is from six and one-half years in the towns and seven years in the country to fourteen years. Education receives particular attention from the State and from local authorities, and in most of the towns there are excellent elementary and higher schools. At Christiania is a university founded by Frederick VI. of Denmark in 1811.

FISHING BOATS IN ARCTIC NORDLAND

The herring and cod fisheries on the Lofoten Banks are, for the hardy Norseman of the Arctic regions, farm, field, and shop, the center and source of all supplies, and without these fisheries Nordland and Finmark would be desolate wastes, their only inhabitants seals and seabirds.

WHALES STRANDED ON THE NORWEGIAN COAST

The fisheries of Norway form one of its chief sources of revenue and afford employment for more than 100,000 men. Cod is the principal fish taken, the herring and mackerel fisheries ranking next in importance. The whale, walrus, seal, and shark abound in the waters of the Arctic Ocean and regular fleets sail every summer to the fisheries in the northern seas.

DENMARK

DENMARK, one of the smallest of the kingdoms of Europe both in area and population, consists of a mainland division comprising the upper part of a long, narrow peninsula jutting northward from the European continent, and of an insular division composed of various islands in the Baltic Sea. The kingdom, exclusive of colonial possessions, lies mainly between 54° 33′ and 57° 45′ N. lat. and 8° 5′ and 12° 34′ E. long. Its greatest length, from Cape Skagen (The Skaw) to the southernmost point of Falster Island, is about 250 miles, and its extreme width is approximately 180 miles, the area being 14,848 square miles.

The mainland embraces the peninsula of Jutland, which has an area of 9,765 square miles. The islands that form the remaining section of the kingdom are, with the exception of the Faroes, located at or near the outlet of the Baltic Sea. Seeland (Zealand), the largest of the islands (1,101 square miles), lies near the Swedish coast; next in size is Fyen (Funen), separated from the mainland by a channel which at one point is very narrow. The Baltic islands constitute about one-third of the area of the kingdom.

Coast-line and Fiords. The coast-line of both the continental and insular portions of Denmark is usually low; this is especially true of the western shore of Jutland, which comprises a succession of dunes, many of which are unreclaimed, sandy beaches, and shallow lagoons, very dangerous to navigators. The eastern coast is somewhat higher and more irregular and possesses several good harbors. The western outliers of the Baltic coast-ridge traverse Southeastern Jutland and the islands, but at no point attain any considerable altitude, the highest elevation, Ejer Bavnehöi, being only 560 feet above the sea. The eastern section of Jutland is very fertile and the elevations are crowned with fine beech forests, frequently extending to the water's edge. From the region of hills the land in general subsides to the north and west, forming moors overgrown with heather. Along the western coast are large fiords which are now little more than shallow lagoons in the process of being gradually filled up by alluvial deposits. The most important of these indentations is the Liim-Fiord, which extends entirely across Jutland from the North Sea to the Kattegat.

The Guden-aa, the longest stream, has a course of only 100 miles and is little more than a brook. The sole large body of inland water is the Lögstör Bredning, an expansion of the Liim-Fiord; it contains a number of islands. Of the other lakes and lakelets none is worthy of mention except Arre and Esrom in Seeland.

Geologically, all the rocks of Denmark belong to the tertiary and upper secondary formations, the strata being, with few exceptions, regularly disposed. Deposits of chalk are found, and over these a bowlder formation with seams of lignite coal, and over this also beds of clay and marl. The soil is almost wholly alluvial.

CHRISTIAN IX., KING OF DENMARK

King Christian IX., fourth son of the Duke of Schleswig-Holstein-Sonderburg-Glücksburg, succeeded King Frederick VII., in accordance with the Treaty of London, in 1863. Three of King Christian's children have become sovereigns of Greece, Russia, and England.

Climate and Resources. The climate of Denmark resembles that of Eastern Scotland, but owing to its low and maritime situation is more temperate than the latitude would indicate. At Copenhagen (Kjobenhavn) the mean annual temperature is 46.6° and the average rainfall is 21.5 inches. In the winter the channels are sometimes blocked with floating ice, but rarely for any extended period.

Denmark has a varied flora. The plants common to Central Europe flourish luxuriantly on the islands and in Eastern Jutland, while along the western coast unusual species are found in great profusion. The forests are mainly of beech, the other varieties comprise the birch, oak, elm, poplar, mountain-ash, and willow. The fauna of Denmark does not differ appreciably from that of neighboring countries. All of the larger quadrupeds are extinct, but the fox, otter, badger, hare, and certain species of aquatic fowl abound, while the seas, sounds, and fiords contain many varieties of fish in abundance.

Denmark is largely an agricultural State. Of its total area 80 per cent is productive, about one-sixth of the uncultivable lands consisting of peat-bogs; considerably less than one-half of the arable portion is under crops, the remainder being in grazing and forest lands. The leading crops are oats, barley, potatoes, rye, wheat, and beet-root. There is also much raising of live-stock, and, indeed, the most considerable industry in the country is the making of butter. The fisheries are not greatly developed, despite the remarkable abundance of deep-sea varieties. Economic minerals are rare and, with the exception of certain clays and sands, almost insignificant in commercial importance. Among other manufacturing industries, machinery, iron, pottery, distilled and brewed beverages, and beet-root sugar are the more noteworthy products.

THORVALDSEN'S MUSEUM, COPENHAGEN

Thorvaldsen's Museum contains the collection of his own and other works of art bequeathed by the great sculptor to the Danish nation. In the central court is Thorvaldsen's tomb.

CHÂTEAU OF FREDERIKSBORG, NEAR COPENHAGEN

The Château, formerly a royal palace, but now a national historical museum, is on the lake of Frederiksborg, twenty-five miles from Copenhagen.

Historical. In early times, Denmark was divided among a number of petty rulers frequently at war with each other. The first king of all Denmark was probably Gorm, who flourished in the 9th and 10th centuries and established his sway over practically all of the lands that are now included in the kingdom. Sweyn (986–1014) began the conquest of England and in 1018 Canute, his successor, became king of that country; but the Danish dynasty in England came to a close in 1042 on the death of Hardicanute without male heirs. For a century and a half Denmark lapsed into insignificance, emerging only with Waldemar II. (1202–41), who conquered Esthonia and other Baltic lands but was subsequently forced to relinquish the greater part of his conquests. His death was followed by a long period of inglorious decadence of the

kingly authority. On the death of Waldemar IV. in 1375 his two daughters claimed the throne for their children. The younger daughter, Margaret, the wife of Hakon, King of Norway, succeeded in having her young son Olaf declared heir to the Danish throne, and on the death of Hakon and that of their son she became queen of both kingdoms. By the Union of Kalmar in 1397 she also became Queen of Sweden. Her successors gradually lost the extensive empire that she had established; but Norway remained in Danish hands until 1814, and in the reign of Christian I. (1448–70) Schleswig and Holstein had passed peacefully to the Danish Crown. The history of Denmark after the death of Margaret is scarcely worthy of record until the first decade of the 19th century. In 1807 Denmark declared war against England as a result of the conspiracy of Napoleon and Alexander I. of Russia; but the English, speedily capturing the Danish navy and the arsenal at Copenhagen, reduced the kingdom to submission. Toward the middle of the century the question of Danish rule in the duchies of Schleswig and Holstein became prominent, giving rise to long controversies and wars, which were terminated in part at least by the transfer of the duchies to Prussia and Austria as a result of the war in 1864.

Chief Danish Cities. Almost one-third of the inhabitants of the kingdom (2,464,000) live in towns, the cities growing rapidly in late years at the expense of the rural districts. Copenhagen, the capital, is the largest city of the kingdom. It is situated on both sides of the Kalvebodstrand, a narrow strait which forms an excellent harbor. The important public structures are the palace of Amalienborg, where the royal family reside; the palace of Charlottenburg, occupied since 1754 by the Royal Academy of Art; the Christiansborg Palace, and the Thorwaldsen Museum. Copenhagen is the commercial and manufacturing center of the kingdom.

Aarhus, on Aarhus Fiord, is an ancient town of Jutland; it possesses the most serviceable harbor on the peninsula and is notable also for its Cathedral, founded in 1201. Odense, on the island of Fyen, lies on a little stream known as the Odense Aa. It has a Cathedral which dates from the 13th century and contains the tombs of King Canute and other sovereigns. Aalborg, situated on the Liim-Fiord in the northeastern part of Jutland, contains some picturesque old houses in the Renaissance style of the 17th century. Horsens, an ancient seaport on Horsens Fiord, on the southeastern coast of Jutland, has an iron foundry and manufactures of machinery.

Government and Education. Under the present constitution the executive authority is vested in the King and his ministry, while the legislative power is divided between the King and the Rigsdag (Assembly). The Rigsdag comprises the Landsthing or Senate and the Folkething or House of Representatives. The Landsthing consists of sixty-six members, twelve nominated for life by the Crown and the remainder elected indirectly by the people for eight years; the Folkething is composed of 114 members elected by universal suffrage for three years. The King must be a member of the Lutheran Church, which is the established religion; he is assisted by a State council consisting of nine ministers.

Elementary education is free and compulsory; the school age is from seven to fourteen years. For secondary, technical, professional, and commercial education there are many institutions. The University of Copenhagen, founded in 1479, affords instruction in all of the departments of higher education.

Danish Colonies. The most extensive colonial possession of Denmark is Greenland, a detached portion of North America, having an area, so far as explored, of 46,740 square miles. The interior is buried under great masses of ice and the only habitable portions

HOJBROPLADS, COPENHAGEN

Extending from the bridge leading to the island of Christiansborg, to the Amagertorv, runs the irregular Hojbroplads (Highbridge Place). In these two squares the retail trade of Copenhagen centers. The streets are lined with quaint shops and buildings, some of which date from the time of Christian IV., and the open space is used as a market. Peasant women from Almack in Dutch costume, fruit venders, market wagons, and eager purchasers present a picturesque and busy scene every morning.

are narrow strips bordering the coast. The climate is exceedingly severe; from October until May or June communication with the outer world is impossible. The trade of Greenland has been a State monopoly since 1774; the principal exports are oil, ivory, and sealskins. Cryolite, a rock important as a source for the metal aluminum, is the only mineral mined, although iron in large masses has been found in several places. The inhabited regions are divided into two inspectorates, the southern, extending to 67° 40′ N. lat. and the northern comprising the remainder of the country; the seats of government are located respectively at Godthaab and Godhavn.

Iceland, which has an area of 39,756 square miles, lies in the North Atlantic Ocean about 300 miles east of Greenland. The highest parts of the island lie in the south, where Öræfajökull (6,426 feet) is located. There are many rivers of considerable length. More than 100 volcanoes exist and twenty-five have been in eruption within the history of the island; the great lava fields of Iceland cover an area of 4,000 square miles. The best-known volcanoes are Hecla, Katla, and Askja; the last mentioned has a crater sixteen square miles in extent. Destructive earthquakes are of frequent occurrence. Intermittent hot springs are abundant, the most famous is the Great Geyser. The climate of Iceland is much warmer than is usual in countries lying in the same latitude. The mean annual temperature is 38.5° in the south and 36° in the north. The vegetation partakes of the character of both the European and the Arctic flora. Beech of a stunted growth and an occasional mountain-ash are the only trees; the natural pastures are excellent, and the raising of live stock forms almost the only branch of insular agriculture. Foxes are common, the sea abounds in fish of many varieties, and the coast is a favorite resort of sea-fowl. Iceland has belonged to Denmark since 1389; its present constitution, dating from 1874, provides for a legislative assembly, a Governor-General at Reykjavik, and a special ministry at Copenhagen. The inhabitants number about 71,000, most of whom are engaged in breeding live stock, especially sheep. The principal exports are fish, cod-liver oil, salmon, sheep, horses, salted mutton, wool, fur, eiderdown, and feathers. The Icelanders still converse in the language of the ancient Sagas. Education is thorough and almost universal and, in proportion to the population, no other country equals Iceland in the number of books and newspapers published. Reykjavik, the capital and only town situated at the southeast corner of Faxafjörd on the western coast, is the outlet for the export trade.

INTERIOR OF FREDERIKSBORG CHAPEL

The chapel occupies the left wing of the castle of Frederiksborg. After the restoration due to the fire of 1859, the "Oratory" of the chapel, in its old splendor of carved wood and ivory, was adorned with a number of fine paintings by the celebrated Danish artist, Carl Bloch.

The Faroes (sheep islands) consist of a group of twenty-one islands situated in the North Atlantic Ocean between 61° 20′ and 62° 25′ N. lat. and 6° 20′ and 7° 40′ W. long.; the total area is 512 square miles. The coasts are steep and rugged and the interiors mountainous, reaching their highest elevation in Österö (2,790 feet) and Strömö (2,415 feet). The rock formations are of volcanic origin, consisting in large measure of horizontal basaltic deposits. The climate is equable and pleasant, the winters being unusually mild. The inhabitants support themselves by sheep-raising, the capture of sea-birds (chiefly loons), and fishing. Public affairs are administered by a Governor (Amtmand), who is also military commandant, judge, and provost. Thorshavn, on the island of Strömö, is the capital.

THE HARBOR, COPENHAGEN

Copenhagen, founded in the 12th century, increased so rapidly through its trade that in 1443 it was made the capital of Denmark and the residence of the king. It is built on the islands of Seeland and Amager, which are separated by a narrow and deep arm of the sea, the Kalvebodstrand, forming an excellent harbor to which the early prosperity of the city largely was due.

CATHEDRAL OF ROSKILDE

Roskilde, once the capital of Denmark, lies eighteen miles south of Copenhagen. In the great cathedral, or Roskilde Kirke, all the kings and queens of Denmark from the 10th to the present century are buried.

RUSSIA

THE EMPIRE OF RUSSIA is, by geographical position and by extent of territory and resources, a factor of dominant importance in the political and commercial development of the present century. Comprising the eastern and larger part of Europe and the northern third of Asia, partaking of the civilization and commercial enterprise of the West, yet semi-Oriental in its ideals, in its institutions, and in the characteristics of its people, Russia is the greatest example in history of a conglomerate mass of varied races and interests, of civilizations and barbarisms, welded together into a homogeneous political whole.

NICHOLAS II.

Nicholas II., the Czar of all the Russias, succeeded his father, Alexander III., in 1894, and was crowned with great pomp at Moscow, in 1895.

The empire, in a compact mass, lies between 38° 30′ and 78° N. lat. and between 17° 19′ E. and 169° 44′ W. long. It has no colonies oversea. The area of European Russia, inclusive of internal waters, is estimated at nearly 2,100,000 square miles, and that of Asiatic Russia at 6,558,800 square miles.

Surface and Rivers. The Russian Empire has almost every variety of surface, scenery, and climate. On a basis of configuration it falls naturally into six divisions: (1) The great central plain of European Russia; (2) the lake region in the northwest; (3) the region of the Carpathian Mountains in the southwest; (4) the highlands of the Caucasus in the south, classed by the Government as in Asia, prolonged westward in the Crimea and eastward in Transcaspia; (5) the Aralo-Caspian basin, lying north of the plateau of Persia and Afghanistan and between the Pamir on the east and the Caspian Sea on the west, and merging on the northwest into the steppes between the Ural River and the Caspian Sea; and (6) the vast Asiatic territory of Siberia.

THE PALACE QUAY, ST. PETERSBURG

Facing the Palace Quay of the River Neva are the Winter Palace and the Hermitage. The former, an immense structure, was built by Peter the Great and contains priceless relics illustrating the historical development of Russia.

The greater part of European Russia is an undulating plain of from 300 to 600 feet elevation, deeply cut by ravines. It attains a height of 1,150 feet in the Valdai Hills, from which as a center radiate most of the large rivers. The Volga, the largest river of Europe, traverses the heart of Russia, flowing east and southeast into the Caspian Sea and receiving as its largest tributaries the Oka and the Kama rivers. It is navigable almost to its source. The Dnieper River rises near the source of the Volga and flows into the Black Sea, draining an area in the southwest as large as France. The Duna or Western Dvina River flows northwest into the Gulf of Riga. The Vistula, emptying into the Baltic Sea, is essentially a Polish river, as it receives no tributaries after crossing the frontier into Germany: its most important affluents are the united Bug and Narew rivers. The Don River, flowing into the Sea of Azov, is subject to floods in spring and is difficult of navigation in summer. In the north the Northern Dvina River, formed by the junction of the Sukhona with the Yug and the Vychegda (Witchegda) rivers, empties into the White Sea, its delta having an area of 440 square miles. The Pechora (Petchora) River, rising in the Ural Mountains, flows into the Arctic Ocean, having a delta 125 miles long. The Ural River, also rising in the Urals, flows southward into the Caspian Sea and during a great part of its course forms the boundary between European and Asiatic Russia.

Lakes and Mountain Ranges. The lake region in the northwest includes Finland and the governments of Olonetz, Novgorod, St. Petersburg, and Pskov. The configuration of the surface is due to glaciation. A remarkable series of parallel valleys and low hills descends to the Gulf of Bothnia. Lake Ladoga (about 10,660 square miles) is the largest lake in European Russia. It has an average depth of 300 feet. The Neva River connects Lake Ladoga with the Gulf of Finland. Lake Onega is connected with the White Sea by a series of lakes and rivers and with Lake Ladoga by the Svir River. Lake Ilmen, a shallow meeting-point of several rivers, empties through the Volkhov (Wolkov) River into Lake Ladoga. The shallow Lake Chudskoye (Peipus) in the Baltic provinces empties through the Narova River into the Gulf of Finland.

The Carpathian region in the southwest, beautifully diversified by forests, culminates in Poland in the height of Lysa Gora (Bald

THE KREMLIN, MOSCOW

The fortress of the Kremlin forms the center about which clusters the wonderful city of Moscow, the "holy and golden-domed." Within the enclosure are palaces, cathedrals, fortifications; a city within a city. The "Great Palace" alone has nine churches and 700 rooms. The Treasure Palace contains priceless relics of former reigns, and in the Cathedral Uspensky Sobor, the emperors and empresses are crowned.

Mountain, over 2,000 feet) and in Southwestern Russia in the Castle of Kremenetz (1,309 feet). Its rivers are the Bug, the Prut (a tributary of the Danube), and the Dniester, the last a tortuous, deeply cut stream crossing the Black Earth Zone and the fertile steppes south of it and emptying into the Black Sea.

The Caucasus Geology. The region between the Black and Caspian seas constitutes the province of Caucasia. The distinguishing physical feature of this section is the Caucasus range of mountains, which extends through it uniformly from southeast to northwest, a distance of about 750 miles. The range is divided into two nearly equal sections by the Darial defile, and from it other short and low ranges branch northward and southward. Some of the peaks of the Western Caucasus, such as Mount Elburz and Koshtan-tau, are higher than Mont Blanc. Crossing the narrow Strait of Kerch, the range skirts the southeastern border of the Crimea for about 100 miles, attaining a height of 5,060 feet and diversifying the scenery in which, as also in its climate and vegetation, this section of Russia is the equal of Italy. Crossing the Caspian Sea, the range extends eastward in Asia as far as the Murghab River, between Merv and Herat. Of the numerous rivers of Caucasia the chief is the Kuban, flowing westward into the Black Sea.

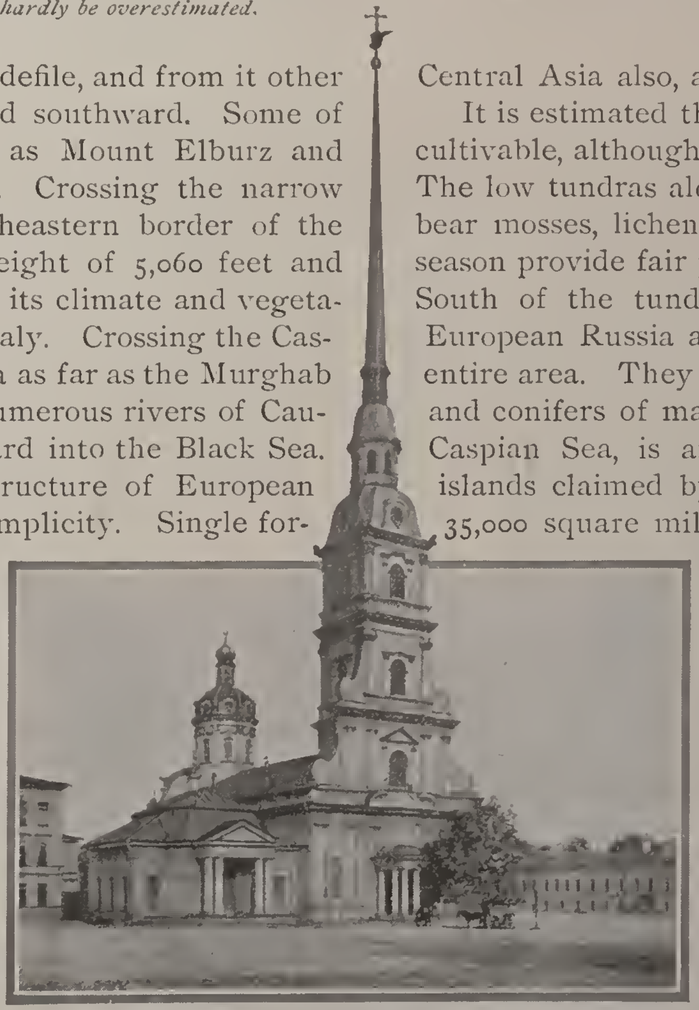
ST. BASIL AND THE RED SQUARE, MOSCOW

The Cathedral of St. Basil is unique. Eleven churches, joined with architectural devices of varying style, go to make up the curiously impressive whole. The cathedral fronts a square which for deeds of violence perpetrated there during three centuries well deserves its name. In the foreground stands a statue to the heroes who, in 1612, saved Russia from Polish rule.

SEBASTOPOL

The "August City" owes its origin and name to Catharine II., who, after wresting the Crimea from the Turks in 1783, established here the future naval arsenal of Russia. It is only within late years that Sebastopol has recovered from the ruin wrought by the Crimean War. Now, however, the magnificent harbor and fortifications have again made Sebastopol one of the strongest naval stations in the world. The strategic value of this port can hardly be overestimated.

The characteristics of the geological structure of European Russia are well described as vastness and simplicity. Single formations frequently exist over entire provinces. For instance in the northern part the granitic formation prevails, next to which lies the Permian group, with limestones and marls. Along the Ural range, the Silurian group predominates, with here and there volcanic rocks broken through. Lithuania and Poland show the Tertiary and Cretaceous formations, while in Southern Russia are granitic rocks overlaid by the Tertiary. The geological structure of the Caucasus shows the Secondary formation broken through by volcanic rocks. The central ridge has a foundation of granite, while the spurs are composed of schistose rocks, succeeded by limestone.



CATHEDRAL OF ST. PETER AND ST. PAUL

On St. Peter's Island, the original site selected by Peter the Great for his city, stands the Cathedral of St. Peter and St. Paul. It has been the mausoleum of the royal family since the foundation of St. Petersburg.

Climate, Flora, and Fauna. Owing to the presence of mountains along the southern frontier, and to the absence of such barriers from the north, the climate of the empire is in general severe. From west to east it increases in rigor. The annual rainfall is fourteen inches in the south, twenty-five inches near the Baltic shores, and decreases rapidly toward the east. In vast sections of the interior, periods of drought occasionally bring famine and pestilence. The richest soil in the empire is that of the Black Earth Zone, extending across Southern Russia from the Ural River to the western frontier. In the Crimea, Bessarabia, and around the margin of the Black Sea, maize and the vine flourish, and in Transcaucasia and the Southern Crimea the olive ripens and cotton may be grown. In the west and southwest the sugar beet is successfully grown. Cotton is cultivated in Central Asia also, and tea has been introduced into the Caucasus.

It is estimated that about two-thirds of the land of the empire is cultivable, although less than one-third is actually under cultivation. The low tundras along the Arctic Ocean are constantly frozen, but bear mosses, lichens, and stunted shrubs, and in the short summer season provide fair pasturage and certain berries fit for human food. South of the tundra zone is a large forest area. The forests of European Russia are estimated to cover more than one-half of the entire area. They contain the larch, oak, maple, ash, lime, fir, birch, and conifers of many kinds. In the south, around the head of the Caspian Sea, is an immense sandy desert steppe. The Arctic islands claimed by Russia — Novaya Zemlya (Nova Zembla, area 35,000 square miles), an uninhabited island, and the Spitsbergen group (area 28,000 square miles) midway between Greenland and Novaya Zemlya — are mountainous and glaciated. They are frequented only by hunters, fishermen, and scientific explorers.

The fauna of Russia is equally varied with the flora. In the north are found the polar bear, arctic fox, seal, reindeer, and wild goose. In the forest region and the Ural Mountains roam the stag, elk, fox, lynx, bear, wolf, squirrel, and hare. The wild boar is hunted in the Duna basin, and the beaver in Minsk. Birds include the grouse, the partridge, and the hazel-hen. The most characteristic animals are the suslik and the baibak, which ravage the corn-fields. Food fishes abound in the Volga, the Ural, and

THE IBERIAN GATE, MOSCOW

This gate is the chief entrance to the Kitai Gorod or "Chinese Town," since the 16th century the center of commercial life in Moscow. Between the two arches of the gate stands the small chapel dedicated to the Iberian Mother of God. This time-honored shrine, venerated alike by monarch and mendicant, is always surrounded by a motley crowd of worshipers.

the northern rivers. The sterlet of the Volga is famed for its caviar.

Industries and Commerce. The staple industry of Russia is agriculture, which occupies nine-tenths of the people. Cereals are the main products of the soil. Chief among these is wheat, of which Russia is the second largest grower in the world, being surpassed only by the United States. In good seasons Russia supplies three-fourths of the European output. Other cereals are barley, oats, buckwheat, millet, and rye, the last forming the staple food of the peasantry. Flax, hemp, hay, potatoes, beet-root, and, in the south, fruit-trees and the vine, are widely cultivated. In the open grass-lands of the steppes an important industry is the raising of live stock. Cotton has also been largely raised in Asiatic Russia in recent years.

The abundant mineral resources of Russia are the basis of a steadily growing industry. The output of iron manufactories has increased fivefold in ten years. Gold is found in Siberia and the Ural Mountains. As a gold producer Russia is approaching the United States, the Transvaal, Canada, and Australia. About 95 per cent of the world's supply of platinum comes from the west side of the Urals. Coal is produced chiefly in Southern Russia, Poland, Perm, and Moscow. Mercury is found in Ekaterinoslav and zinc in Poland. The petroleum industry of the Caspian region around Baku has attained enormous proportions.

Russian manufactures are developing rapidly. They are protected by a tariff averaging about 35 per cent on imports. Most of the industrial population, however, work in their own homes. Linen is largely manufactured by hand-looms. Of the manufactories, the most important are cotton, woolen, silk, linen, and hemp mills, iron-works, sugar and petroleum refineries, breweries and distilleries, flour-mills, tobacco-works, and brick-works. The textile industries are centered chiefly in Moscow, in St. Petersburg, and near the central and the Polish coal-fields.

CANAL ENTRANCE TO THE HERMITAGE ART GALLERY, ST. PETERSBURG

The Hermitage, as founded by Catharine II. in 1765, was a small pavilion attached to the Winter Palace. Ten years later an art gallery was added, and united to the original building by an arch in the form of a covered bridge thrown over a small canal.

The foreign commerce of European Russia is very large, the exports being nearly a third greater than the imports. The chief goods imported are cotton, tea, iron and machinery, wool, wine, fruits, vegetables, and oil. The chief exports are grain (56 per cent), raw and dressed flax, linseed, timber, hides and skins, hemp, tallow, wool, spirits, petroleum, tow, and bristles.

Much of the internal trade of Russia is carried on in great fairs, frequented by people from far and near. The most celebrated are those held at Nizhniy Novgorod, Kharkov, Poltava, and Kiev. Railway development, however, has caused a decline in the importance of these great gatherings. Moscow is the principal railway center from which radiate lines to all the chief cities of European Russia and to the Asiatic system.

THE HERMITAGE OF CATHARINE II.

The present Hermitage has little save its traditions to remind one of Catharine the Great, having been entirely remodeled in the Grecian style in the early half of the last century. The Hermitage is considered one of the noblest modern buildings in Europe, and one of the best designed of museums. It houses an invaluable collection of Russian antiquities.

During the spring and early summer the rivers of European Russia with their connecting canals afford about 22,000 miles of navigable waterways. Owing to their mutual proximity at certain points, transportation from one river to another is readily accomplished. The cart roads of Russia are generally bad, but in winter sledging makes transportation easy.

People and Cities. Of the enormous population of the Russian Empire, aggregating about 128,900,000, Slavs constitute about 73 per cent of the whole people, Finns 5 per cent, Turko-Tartars 9 per cent, and Jews 3 per cent. The population is very unevenly distributed, varying from an average of one to the square mile in Siberia, to fifty-four in Caucasia and 193 in Poland. Emigration is on the increase.

The people of Russia comprise two great classes: (1) The aristocracy, the educated class, numbering about 10,000,000 and including the Government officials and their subordinates; (2) the peasants, numbering 120,000,000, who until 1861 were serfs and of whom 80 per cent are illiterate. There is no middle class in Russia.

ODESSA

Odessa upon the Black Sea, the great mercantile city of the Empire, owes little of its prosperity to Russia. Its Neapolitan founder, its French refugee governor, and various English capitalists, have literally made Odessa.

THE GREAT THEATER, WARSAW

Warsaw, one of the most attractive cities of Eastern Europe, is especially notable for the many beautiful palaces and public buildings that adorn its streets—due largely to the old Polish nobility's love of display. Among the fine buildings grouped in Senators Street is the Great Theater for Polish drama.

The empire has more than twenty cities of over 100,000 population. Most towns, however, are really little more than villages, poorly built of wood or brick and having wretched streets. St. Petersburg, the capital, is built partly on islands at the mouth of the Neva River and has an unhealthful climate. The city commands about one-third of the trade of Russia; it has large manufactories and is the chief center of literature, science, and art.

Moscow, the ancient capital of Russia, situated on the small river Moskva, is a focus of trade and railway routes and the greatest industrial center in the empire. Architecturally the city is remarkable, containing the picturesque old palace and fortress of the Kremlin, the Church of Basil the Blessed, etc.

Riga, at the mouth of the Duna River, has a large export trade in oats, rye, and lumber, and imports coal, especially from Great Britain. Warsaw, the ancient capital of Poland, is a meeting-point of trade routes from all parts of Russia and Western Europe and is an important center of learning and art. Kiev, in the center of the basin of the Dnieper River, is one of the most ancient towns of Europe and the seat of a great university. It has large sugar refineries. Nikolaiev is the chief naval station on the Black Sea and has a large grain and petroleum trade. Odessa is the chief seaport of the Black Sea and the seat of a small university. Sebastopol, in the Crimea, is celebrated for its siege by the allied armies in 1854.

Historical. Russia was known to the ancients as Sarmatia. It had Greek colonies on its southern coast and was overrun by the Goths, Huns, Avars, Bulgarians, Magyars, and Khazars. About the 7th century the Khazars, moving down from north of the Caspian Sea, established themselves in Southern Russia. At about the same time the Slavs moved eastward from the region of the Carpathian Mountains in two or three migratory waves. In the 9th century the Russian Slavs were confined mainly to the regions near the sources of the Dnieper, Dniester, Volga, Bug, and Don rivers, their chief towns being Novgorod and Kiev. In 862 the Scandinavian Rurik and his two brothers, chiefs of the "Varangians" (Norsemen, called *Rus*, whence the name Russia), established an orderly régime at Novgorod. The dynasty

KIEV, ON THE DNIEPER

Although Kiev is situated in one of the richest agricultural districts of Russia, and commands a large trade, it is famous not so much for its wealth as for its sanctity, being called the "Jerusalem of Russia." Kiev is one of the oldest cities of Europe, mention being made of it in annals under 864 A. D.

THE MONASTERY OF SOLOVETSKIYE

Solovetskive Monastery, near Archangel, is one of the most sacred places in Russia. Its history, dating back to its founding by St. Sabbatheus in 1429, is one of unique independence, for the monks could fight as well as pray. About 1594 the fortress wall of granite boulders, built by their own hands, was completed, and a century later withstood a nine years' siege by the orthodox church party and the Czar. As late as 1855, when they refused to surrender to the British White Sea Squadron, the monks were true to their free traditions.

founded by Rurik continued in power for 700 years, in spite of continual civil wars and Tartar invasions.

Vladimir's reign (980–1015) was the "heroic" epoch of Russian history. The boundaries of the empire were greatly extended, the Norsemen became amalgamated with the Slavonic race, and the nation embraced the Christian faith. Under Yaroslaff, Vladimir's son, the first Russian code of laws was compiled; but after his death in 1054 the country became an agglomeration of petty rival principalities.

ANDRÉ'S STATION, SPITSBERGEN, RUSSIA

The Mongol invasion and conquest of all Russia except Novgorod occurred about 1240, and the Russian principalities became tributary to the Khans. The Mongol conquest was a serious blow to the political, social, and moral welfare of Russia, as it destroyed the growing germs of self-government and checked the progress of civilization. Under Ivan III., "the Great" (1462–1505), Russia became a united empire and was delivered from the Mongol yoke. He was the first ruler to assume the title of Czar of all the Russias. Under Vasili III., his son (1505–33), and Ivan IV., "the Terrible" (1533–84), his grandson, the work of extension and consolidation of the empire was greatly advanced. Feodor (1584–98) was the last ruler of the house of Rurik and died childless. After his death the throne was seized by various pretenders, but in 1613 Michael Feodorovitch Romanoff (1613–45), founder of the present ruling house, was chosen Czar by a representative assembly.

SPITSBERGEN

The barren islands of the Spitsbergen, covered with perpetual snow and glaciers, lie half-way between Greenland and Novaya Zemlya. Within the last century they have attracted much attention as the starting point for numerous Arctic expeditions, the most recent of which was that of M. André in 1897.

Peter I., "the Great" (1689–1725), his grandson, was in some respects the ablest ruler Russia has ever had. He not only did much to consolidate and extend the power of Russia but also effected many reforms in government. He founded St. Petersburg in 1703.

Catharine II., "the Semiramis of the North" (1762–96), proved herself the greatest sovereign of Russia after Peter the Great. In the wars with Turkey, Persia, Sweden, and Poland she largely extended the limits of the empire, driving the Turks out of the Crimea, pushing the Russian frontier to the Bug and the Dnieper rivers, and acquiring the right of free passage of the Dardanelles. Under Alexander I. (1801–25), her grandson, Russia was drawn into the great struggle with Napoleon.

Alexander promoted trade and manufactures, encouraged education and science, and carried out many reforms, including the abolition of serfdom in the Baltic provinces. He conquered Finland (1808), and became King of Poland (1815), granting it a constitution that continued until 1830, when it became a Russian province. With the rulers of Austria and Prussia he formed the Holy Alliance (1815), a league to resist dynastic changes, which was later joined by all the other European sovereigns except those of Rome and England, but which came to an end after the French Revolution of 1830. It proved a bar to liberal progress, and on the accession of Nicholas I. (1825–55) the higher classes rose in a rebellion which, however, was speedily crushed. His craving for territory led Nicholas into numerous wars, and finally, on the refusal of his demand for a protectorate over the Greek subjects of the Sultan of Turkey, into the Crimean War (1853–56), which almost drained Russia of her vast resources of men and money. Nicholas died during this war, which was ended soon after the accession of his son,

Alexander II. (1855–81), by the Treaty of Paris (1856). Alexander II. emancipated the 14,000,000 serfs of the empire (1861) and introduced important reforms of justice. A Polish insurrection was suppressed with great severity (1863–64), and in 1868 the last remnants of Polish autonomy disappeared with the incorporation of the kingdom into the empire. Alaska was sold to the United States in 1867 for $7,200,000.

In April, 1877, owing to the Sultan's refusal to accede to the demands of the European powers for a better government of his Christian subjects, Russia declared war against Turkey. After a campaign marked by the fall of Kars, by the heroic defense of Plevna under Osman Pasha, and by desperate fighting in the Sipka Pass of the Balkans, the victorious troops of the Czar appeared before Constantinople. As a result of this war Russia recovered the part of Bessarabia lost in 1856 and acquired Ardahan and the ports of Batum and Kars, thus extending her Caucasian frontier.

THE CASTLE OF WIBORG, FINLAND

The Castle of Wiborg, scarred by many a battle before fire finally reduced it to ruins, dates from the 13th century, when Torkel Knutson built it. In 1710 the old Swedish fortress and the town fell before Peter the Great, and Wiborg became a Russian provincial capital.

RIGA ON THE DVINA

The history of Riga, from its foundation by Bishop Albert in 1200 to its cession to Poland in the 17th century, was one of continual religious warfare under the Order of the Brethren of the Sword. Enlarged and greatly improved, Riga is now a commercial city of importance, although, in the older quarter, it still retains many of its Hanseatic characteristics.

In 1879 Alexander II. entered upon a reactionary policy because of the attacks of Nihilists, and in 1881 he was assassinated by them. He was succeeded by his second son, Alexander III. (1881–94), under whom the reactionary policy was strengthened.

Alexander III. was succeeded November 1, 1894, by his son, the present Emperor Nicholas II. On the initiative of Nicholas II. a conference of representatives of twenty-six nations, including all the great powers, assembled at The Hague, Holland, in May, 1899, to discuss ways in which to check the increasing burdens of European armaments and to facilitate the peaceful settlement of international disputes. The most important result of this "Peace Conference" has been the creation of a permanent international tribunal at The Hague for the arbitration of all differences that disputing powers may agree to submit to it.

The other chief events of the reign of Nicholas II. have been the building of the Trans-Siberian Railway System, begun in 1891; the completion in December, 1898, of the extension of the Transcaspian Railway from Merv in Turkestan to Kushk across the Afghan border; and the interference of Russia, supported by France and Germany, which in 1895 compelled the retrocession to China of all the mainland territory conquered by the victorious troops of Japan. The result of this interference was the acquisition by Russia of a lease of the Liautung peninsula, together with various rights in Manchuria which were tantamount to Russian occupation of that country. As a sequel to this advance came the war of 1904-5 with Japan, by which Russia in turn was forced to recede its spoils, and by which the political prestige of the ruling official class of Russia was so shattered that latent revolutionary tendencies of the people began to find expression throughout the empire. Forced to make concessions to this spirit, the Czar in 1905 promised the creation of a national legislative body, based on a liberal suffrage. The advocates of aristocracy were put aside, and a ministry of liberal leaders was installed in power to execute the promise.

Government. Russia is now in transition from an absolutism to a constitutional government. The Czar holds all the important executive and judicial powers. The order of succession is by primogeniture, with preference of male over female heirs. Every Emperor of Russia, with his consort and children, must be a member of the Orthodox Greek Church. The Emperor is assisted in the work of administration by four great boards or councils, the Council of State, the Ruling Senate, the Holy Synod, and the Committee of Ministers. The Council of State consists of a president and an unlimited number of members appointed by the Emperor. Its chief functions are to consider projects of law submitted by the Ministers and to discuss the budget and public expenditures. The Ruling Senate is charged with the registration and promulgation of the imperial decrees; also it serves as a high court of appeal. The Holy Synod superintends the religious affairs of the empire, and the Committee of Ministers comprises the heads of eleven departments of state and other prominent functionaries.

For purposes of local administration the empire is divided into seventy-nine governments, eighteen provinces, and one section (the island of Sakhalin). Some of these divisions are united into "General Governments" of which there are ten, each being under a Governor-General who represents the Emperor and who has supreme control,

MARKET BOATS, HELSINGFORS, FINLAND

The capital of Finland is situated on the Gulf of Finland, between one and two hundred miles from St. Petersburg. The harbor is excellent as well as picturesque.

Each government is divided into districts. A further subdivision is into cantons, which again are subdivided into communes. While the people enjoy to some extent the privileges of local self-government, the system has been much curtailed in late years.

The Russian army on a peace footing is estimated at about 1,100,000 men. In war the total strength is about 4,600,000. Military service is compulsory. The militia *(Opolchenie)* includes all men who have seen active service or who have escaped enlistment. The Cossacks comprise eleven separate *voiskos*, each of which equips its own soldiers. Russia's extensive coast line and land frontier are protected by numerous fortifications. The efficiency of the Russian navy suffers from unavoidable separation of its squadrons. This is due in part to the wide distribution of the territory of the empire and the isolation of its waters, and in part to the political restrictions limiting naval movement. Four distinct fleets have to be maintained, the Baltic, the Black Sea, the Caspian Sea, and the Siberian or Pacific. By agreement of the great powers of Europe, the Dardanelles since 1841 has been closed to all non-Turkish ships of war, except with the consent of Turkey. In view of this, the project of a canal to connect the Black and Baltic seas has been revived. The so-called "Volunteer Fleet" comprises merchantmen used as transports and capable of being armed as cruisers.

Both revenue and expenditure in Russia are classed under two heads, ordinary and extraordinary. The chief sources of ordinary revenue are direct taxes, licenses, indirect taxes, duties, state monopolies, state domains, and payments for the redemption of land by peasants and liberated serfs. The main items of ordinary expenditure are on the public debt, the Holy Synod, and the ministries. Extraordinary revenue includes mainly the money raised from loans and the perpetual deposits in the Imperial Bank of Russia. Extraordinary expenditures are those incurred for new railways, famine relief, and public debt conversion.

DARIEL PASS IN THE CAUCASUS

This wild and narrow defile, the chief pass in the Caucasus, has been celebrated from the earliest times for the grandeur and impressiveness of its character. Through it runs Dariel Road, the great military highway from Vladikavkaz to Tiflis. The gorge was known to the ancients as Portæ Caucasiæ, and high up on the overhanging cliffs are the ruins of the ancient fortress of Darialan, built A. D. 87-103.

Justice, Education, etc. Important reforms in the administration of justice were inaugurated in 1864 by the Czar Alexander II., who instituted assize courts with juries, elective justices of the peace, courts of appeals, etc. Although their adoption has been restricted by reactionary edicts, the former abuses have been greatly modified and the horrors of the Russian dungeons and of exile to Siberia are rapidly becoming a mere tradition. In principle, the judicial power is supposed to be independent of the administrative. In 1885, however, the irremovability of magistrates was restricted. In 1889 the privileges of jury trial were suppressed in certain cases. Justices of the peace have been retained in only a few of the larger cities. Special courts have jurisdiction over political crimes such as Nihilism. In these cases, however, the very semblance of a fair trial has been set aside in recent years by a secret administrative process that sends even suspects into exile. A strict censorship of the press has been maintained since 1872. Newspapers are allowed to circulate only among regular subscribers, the sale of single copies being prohibited.

The schools of the empire are under various Government ministries, chiefly the Ministry of Public Instruction. There are ten universities. Secondary instruction is given in a large number of gymnasia and in technical and other schools. Elementary education is neglected. The established religion of the empire is the Russo-Greek, officially called the "Orthodox Catholic faith," which maintains the relations of a sister church with the four patriarchates of Constantinople, Jerusalem, Antioch, and Alexandria. The Emperor is the head of the Church, with powers of appointment to and dismissal from office. With the exception of the restraints laid on the Jews, all religions may be professed freely in Russia.

SCENE IN THE CAUCASUS

West of the famous Dariel defile are the highest summits of the great chain of the Caucasus Mountains, on the slopes of which originate immense glaciers rivaling in number those of the Alps. Chief among these lofty mountain peaks are Elbruz and Kazbek, surpassing in altitude Mont Blanc.

Finland. The Grand Duchy of Finland, lying between the Gulfs of Finland and Bothnia, was conquered by Russia from Sweden, and finally annexed in 1808. It has an area of about 144,000 square miles. The sea-coast presents a constant succession of fiords and rocky headlands, and at the mouths of the fiords, which are rarely more than a few miles in extent, are numerous islands. Some of these islands, like the isles of Sveaborg, have been converted into fortresses of great strength. The interior, especially of Southern Finland, is a labyrinth of lakes, few countries being so covered with water. To this peculiar feature is due the popular designation of Finland, the "Land of the Thousand Lakes." Of its nearly 2,500,000 inhabitants almost all are Lutherans, and Swedish is the language of the upper classes. Rye, barley, oats, and potatoes are produced, but large importations of cereals are necessary. Live stock in the extreme north includes the reindeer. The iron industry is of importance. Copper, lead, and graphite are found. Cotton, flax, and woolen mills, distilleries, match factories, sugar refineries, sawmills, shipyards, etc., are successfully conducted. The forests produce great quantities of timber. Exports include timber, wood-pulp, paper, butter, textiles, and iron. Helsingfors, the capital, has a large shipping trade, chiefly with England. It is the seat of an important university and library, and has the most northerly botanical garden in the world.

Finland has been allowed nominally to retain the form of constitutional government, having its Diet of four estates (nobles, clergy, burghers, and peasants) with its Senate of twenty-two members. The constitutional rights of the Finns, however, have been practically annulled since February 15, 1899, when an imperial decree reserved to the throne the right of decision on any matter bearing on the interests of Russia.

ASIATIC RUSSIA

ASIATIC RUSSIA, comprising an enormous extent of contiguous territory, in area more than twice the size of the United States, may be divided geographically into three distinct but adjacent regions, each of which is parceled out among separate political subdivisions. The largest region is Siberia, which extends across Northern Asia from the Ural Mountains to the Pacific Ocean, and whose great area of 4,833,496 square miles exceeds that of the whole Chinese Empire. Southward of Siberia are the provinces of Central Asia, whose combined land area of 1,353,278 square miles exceeds somewhat that of British India. West of Central Asia, the waters of the Caspian forming the boundary, are the provinces of Caucasia with an area of 180,843 square miles, somewhat greater than that of Japan. In two other regions Russian control has been supreme; in the khanates of Bukhara and Khiva and in Manchuria.

SIBERIA

The vast region of Siberia extends entirely across Asia, north of the Central Asian provinces and the Chinese Empire, and covers over twenty-five degrees of latitude and about 130 degrees of longitude, with an area of 4,833,496 square miles. Politically it is diversely organized. Tomsk and Tobolsk, in Western Siberia, are governed like the provinces of European Russia. Other provinces are grouped under imperial viceroys located at Irkutsk and at Khabarovsk.

TIFLIS, CAPITAL OF THE CAUCASUS

Tiflis has a mixed population of Caucasians, Armenians, Persians, and Russians and is not only a strong military post but a great trading center as well. It is picturesquely located in a basin surrounded by high mountains.

IRKUTSK, THE EAST SIBERIAN CAPITAL

The chief city of Eastern Siberia, where the imperial viceroy has his headquarters, is located on the right bank of the Angara, where that river is joined by the Irkut. The town dates from 1652, when a tribute station was established here at which the newly conquered tribes were required to pay their taxes. The place became seat of a viceroy in 1783. The town is poorly paved and lighted, but it is a busy trade center and a point of some little intellectual culture. The overland tea-trade from China is largely centered at this point.

Divisions and Physiography. Siberia falls naturally into three divisions, with distinct physical features. Western Siberia consists of the flat, marshy country between the Yenisei River and the chain of the Ural Mountains, a series of low elevations, formed by a succession of separate upheavals, extending some 1,500 miles north and south along the European frontier, and has an area of 870,818 square miles. Eastern Siberia, situated east of the Yenisei, more diversified in contour than Western Siberia, rises here and there into hills difficult of access, culminating on the south in the mountainous province of Transbaikalia. It stretches to the extreme northeast along the mountains that form the watershed of the Pacific slope, covering some 3,044,512 square miles. The Amur Region (area, with Sakhalin, 918,166 square miles) borders on the Sea of Japan and drains eastwardly into the Pacific, its chief river being the Amur (Amoor), a stream of great importance to Russian commerce and colonization. The mountainous peninsula of Kamchatka contains ten active volcanoes, the only active ones in Russian territory.

All the rivers of Siberia flow into the Arctic Ocean, thus indicating the general northerly slope of the country from the highlands of the mountain chains that stretch northeastward from the Pamir to the Bering Sea — the Tian Shan, Altai, Sayan, Great Khingan, and the Stanovoi Khrebet watershed. The rivers of Siberia, the Ob, with its affluent the Irtysh (Irtish), the Yenisei, and the Lena, are among the largest in the world, but owing to the rigorous climate are usable as waterways only about six months in the year. The Ob and Irtysh drain an area almost equal to that of Western Europe and afford 9,000 miles of navigable water. The Yenisei, like the Ob, has its sources in the Mongolian table-land. It drains Lake Baikal, which has a depth of 4,200 feet and is the largest body of fresh water in Asia.

People. The native people of Siberia are grouped ethnologically into three divisions, of Turkish, Finnish, and Mongol blood, respectively. The Turkish stocks are the Kirghiz, Tatars, and Yakuts. The Kirghiz are nomads of the southwestern steppes, professing Mohammedanism. The Tatars, who have strains of Finnish and Mongol blood, and who also profess Mohammedanism, are farmers and traders living in Western Siberia. Some of them have abandoned the tribal system. The Yakuts are hunters and herdsmen of the Yakutsk province, professing Shamanism. North of the Turkish tribes are the two Finnish stocks of the Voguls and Ostiaks, who live by hunting and fishing on the desolate Arctic plains of Tobolsk. They usually undergo baptism but are really Shamanists.

All through Eastern Siberia and the Amur provinces are Mongol races. The most important are the Buriats of the Irkutsk and Baikal region. They are a numerous and intelligent race of farmers and herdsmen, holding either to Buddhism or Lamaism in religion. The

Teleuts and Kalmucks are Buddhist nomads of the Altai highlands. In the extreme north of Tobolsk and Yeniseisk are the Samoyeds, Arctic herdsmen owning great herds of reindeer, and pagan in belief. East of the Yenisei River are the Tunguses, Shamanistic nomads divided into a great number of separate tribes. Along the Pacific coast are the Giliaks, hunters and fighters. Finally there are the Manchurians of the Amur Valley, farmers of near kin, racially, to the Chinese.

Far more important politically and socially are the Russian settlers scattered across Siberia in the great belt of arable land. As early as 1591 the Russian government began to use Siberia as a place of exile. Small numbers of criminals and political offenders were sent from time to time until 1807, when the custom became a settled policy of state. By 1823 the government had created a steady stream of forced emigration, one-fifth of those going being criminals, three-fifths political offenders, and one-fifth voluntary companions of exiles. Nearly a million settlers were thus poured into Siberia up to 1899, when the system was practically abolished by the tsar. For some years before the exile system was given up the Russian government was organizing voluntary emigration from Russia to Siberia. Many thousands of free settlers have been planted along the line of the Trans-Siberian road, towns have sprung up, churches have been established, and a creditable element of pioneer farmers has been added to the older society of exile families.

GREEK CHURCH, VLADIVOSTOK

Wherever the Russian settler goes in Asia he builds an Orthodox Greek church for his worship. Russia is tolerant, however. Along with the Greek churches in Vladivostok are those of the Catholics, Lutherans, Chinese, Japanese, and Korean religions.

Towns and Resources. The chief towns of Siberia are on or near the Trans-Siberian Railway line. Tomsk, an industrial center near the railroad, has the one university of Siberia. Omsk is where the line crosses the Irtysh. Krasnoyarsk, on the Yenisei, is the center of a rich mining district. Tobolsk, formerly the capital of Western Siberia, is now an out-of-the-way and decayed town. Irkutsk, near Lake Baikal, is an industrial and educational center. Chita, the capital of Transbaikalia, is at the head of navigation on the Amur River. Vladivostok is one of the Pacific termini of the transcontinental railway.

The industries and resources of Siberia have been but little developed. In the zone of the tundras along the Arctic Ocean live only nomad hunters and fishermen. Here the surface of the land is only thawed out for a few inches during about two months of the year. From the islands and mainland large amounts of fossil ivory have been obtained, constituting an important article of commerce. South of the tundras and reaching from the Ob River to far beyond the Lena is a zone of almost impenetrable forest, with vast resources of timber and furs. South of the forest belt is a rich agricultural district stretching eastward almost to Lake Baikal, in which wheat, rye, and oats are largely cultivated, and domestic animals are raised. The valleys of the Amur and Usuri also are very fertile, but have a climate too wet for profitable wheat-growing.

Gold, obtained by placer mining, is the chief mineral product of Siberia, forming two-thirds of the Russian output. Rich deposits of silver, lead, copper, iron, and coal exist, but are largely undeveloped. Petroleum is found in Sakhalin. Large numbers of men are employed in timber-cutting in the forests. Rich seal fisheries are located on the Pacific coast.

Manchuria. As a return for Russian assistance in settling the issues of the war of 1894–95 with Japan, China conceded to Russia the strongly fortified naval station of Port Arthur, with other rights that gave excuse for the Russian occupation of Manchuria in 1900. As a result of the war with Japan in 1904-5 the political control of the country was lost, but Russia retained possession of the railway that lay north and east of the town of Harbin, and held the right to maintain a limited force of soldiery as a railway guard for the line. This arrangement guarantees to Russia the control of its direct rail connections with Vladivostok, the eastern outlet of Siberia, and establishes also its commercial predominance in Northern Manchuria.

VLADIVOSTOK AND HARBOR

The conquest of the Amur basin was a great step by Russia toward its cherished desire of an ocean seaport. In 1859 the advance on the Amur culminated in securing the coast region and in 1860 Vladivostok was founded as the stronghold of Russian power on the Pacific. It became a town in 1880 and was made a terminus of the great Trans-Siberian Railway. Its harbor is sheltered, and although choked with ice three months of the year, is of great commercial importance.

STREET IN HARBIN, MANCHURIA

The little town of Harbin was not important until 1898 when the building of a branch line of the Trans-Siberian Railway made it a junction point of the Port Arthur and Vladivostok divisions, and one of the centers of Russian influence in Chinese territory. Although restored to China by treaty, the town remains an important depot of Russian Commerce.

Trans-Siberian Railway. Prevented, through a combination of political and physical conditions, from using sea-power as a means toward political, commercial, and industrial advancement, Russia has availed herself of a land-power — the railroad; and it is in Asia that she has put this instrument to its most effective uses. It would be impossible to overestimate the importance, not only to Russia but to the world at large, of the great Trans-Siberian Railway which, since 1891, Russia has been building to connect her European frontiers with Vladivostok and other seaports on the Pacific Coast. Supplementary lines have been built to Ekaterinburg, Tyumeñ, and Orenburg, connecting with the various branches of the European system that cross the frontier in the Ural region. Also, under concessions from China, the East Chinese or Manchurian line, 1,273 miles long,

of which 945 miles are in Chinese territory, has been built from Onon on the Transbaikalian section to run through Manchuria, south of the original main line, to Vladivostok, with a branch extending down to Talienwan and Port Arthur. The last rail was laid on the Manchurian division in November, 1901, completing, with the exception of a forty-eight-mile gap filled by steamer service across Lake Baikal, an all-rail route from St. Petersburg to the Pacific, about 6,500 miles, or twice the distance between New York and San Francisco. When the Chinese Eastern line was opened to mail service, October, 1903, the scheduled time from Moscow to Dalny (Talienwan) was seventeen days.

TUNGUS HUT, AMUR BASIN

The temporary huts erected by the wandering tribesmen of the Amur basin when they select a spot from which to carry on a season of fishing and hunting are interesting structures. Raised from the ground, they shelter the dogs and sledges of the family while giving the dwellers immunity from the attacks of wild animals.

TUNGUS FAMILY, EASTERN SIBERIA

The Tungus people are not savages, although nomadic and living a life on the wintry steppes that is often filled with privation. They are racially connected with the Northern Chinese and show the relation in feature and costume. Travelers bear witness to their kindliness and honesty of nature and many explorers of the northern latitudes have been succored by them. Some of the more southerly tribes are settled farmers.

CENTRAL ASIA

The political district called Turkistan, ruled by a governor-general located at Tashkent, includes four provinces, with a combined area of 409,414 square miles. The country between the Amu River and the Caspian Sea is known as Transcaspia. It has an area of about 214,237 square miles, and is under military government. The northern part of the Central Asiatic country, lying east of the Ural River and comprising four provinces, forms the General Government of the Steppes.

Physiography. The whole region, to which the name Turkistan is often loosely applied, is divided about equally between highlands and lowlands, the former rising sometimes to peaks of over 20,000 feet elevation, and the latter sinking to the Caspian shore, about eighty-five feet below sea-level. The climate is cold and severe in winter, especially on the high plateaus. The lower areas have hot summers. The chief mountains of Central Asia are the Tian Shan, Alatau, Alai, and Trans-Alai, located in the eastern part, the latter two being the chief ramparts of the Pamirs, or "roof of the world," northeast of Afghanistan, the meeting point of the three empires of Russia, China, and British India. The plain stretching north from Persia and Afghanistan consists of treeless and relatively arid land, the ancient bed of a great inland sea, of which the Caspian and Lake Aral are remnants. Much of this region is sandy desert, with occasional oases. It is dotted with many salt and fresh water lakes and marshes. The Syr River, rising in the Tian Shan Mountains and flowing into Lake Aral, supplies water for the irrigation of Fergana, the most fertile region of Turkistan. The Amu River is more than 1,500 miles long and navigable for over 950 miles from its mouth. Lake Aral and the Caspian Sea, which receive the scant drainage of Turkistan, are salt-water bodies that are slowly drying up. The Caspian sea-bottom is volcanic. Lake Aral has an area of 26,166 square miles, a little more than Lake Huron. In the northern part of Central Asia is the great steppe region, consisting of vast stretches of level or undulating plain. Enormous areas of these are barren wastes of arid, stony, or sandy soil, but there are also in the steppe regions many extensive tracts of fertile prairie lands capable of supporting a large population.

People and Culture. The most prominent racial element of the Central Asian provinces embraces tribes of the great Turkish stock. The Kirghiz tribes are chiefly nomads of the northern steppes. The Kara-Kirghiz of the northeastern plateau region are mountain dwellers scarcely touched by Russian influence. In Transcaspia are the Turkomans, nomadic until recent years, but now partly settled down to agricultural and pastoral life. In Turkistan proper are the Uzbegs, a vigorous Turkish stem which was the ruling element until the Russian conquest. Some of the Uzbegs have become town-dwellers, with an admixture of Iranian blood, and are called Sarts. The Tatars are another Turkish race, in which there is a Mongol strain. They are along the edge of the northern steppes. All the Turkish peoples are Mohammedans, although there are large elements of the original Shamanism among the Kirghiz. They are intelligent and energetic races, splendid fighters, hardy and vigorous, but lacking in political cohesion. Their natural condition for centuries has been nomadic life under the tribal system. The tribal organizations are still largely retained under Russian control, but the people themselves are being slowly forced out of the nomadic life into agricultural communities.

CONVICT VILLAGE NEAR VLADIVOSTOK

The Russian transportation system for convicts provides for their permanent settlement in Siberia as free farmers when their terms have expired. The villages of released convicts are rough and uninviting in appearance, but well kept and orderly. The greater part of the men who have served their time become steady workers and often are prosperous.

GREAT BAZAAR, TASHKENT

The Bazaar or business district of Tashkent is a mass of frail little wooden shops or tents arranged in narrow streets, each avenue devoted to a special trade. Here and there are caravanserais or quarters for the beasts of the caravans that are constantly arriving from other parts.

In the highlands of the east and northeast are the Kalmucks, a Mongolian stock holding to the Buddhist belief. They have a tribal system under Russian control, and are partly nomadic, partly agricultural. In the Pamirs are the Tajiks, people of Iranian blood and Mohammedan belief. Finally, there are Russian colonists, established all over Central Asia in scattered farm communities. Most of the settlers are peasants who are developing the country with the assistance of the government, and who bring with them the Orthodox Greek church of European Russia.

RUINED MOSQUE OF BIBI-KANEH, SAMARKAND

High up above the market place in Samarkand loom the ruins of the great mosque built in the 14th century by Bibi-Kaneh, favorite wife of Timur, the great Mongol conqueror. It was once a Mohammedan college, and in a vault within its walls the body of Bibi-Kaneh was laid to rest in a coffin studded with golden nails. The great double dome still covers a portion of the edifice, but in recent years the hall under the dome has been used as a cotton market and caravan stable.

Resources. The nomad inhabitants of Central Asia for centuries have depended upon their flocks and herds as means of sustenance, and stock-raising is still the chief interest of the region. Vast grassy plains and plateaus support countless flocks of sheep, herds of cattle, horses, and camels. Samarkand and Fergana are the most active agricultural regions. Cereals are grown in large quantities; fruit gardens are extensive and the Samarkand vineyards have more than local fame. Plantations of cotton are increasing year by year and partly supplying the demand of European Russia. Silk is a staple product. In the northern government of Akmolinsk wheat, rye, oats, and tobacco are extensively grown. Transcaspia, despite many disadvantages, is developing irrigation methods and producing wheat, barley, lucerne, cotton, and silk. The Central Asian provinces are deficient in forests, except in some of the mountain districts, and these have no commercial value as yet. In mineral wealth only Akmolinsk is thus far notable, the Tarbagatai Mountains holding rich deposits of gold, silver, lead, copper, iron, and coal, whose development by modern mining methods has been begun. Salt is gathered from the ancient lake beds of the north.

Industry and Trade. The Transcaspian Railway, extending from the Caspian Sea nearly to the Indian boundary, not only possesses an immense strategic value for military movement on the Persian, the Afghan, or the Indian frontiers, but has vastly increased the trade of Central Asia and has led to the greatly enlarged cultivation of cotton for export to European Russia. The chief manual industries of Central Asia, as might be expected, are those based on stock-raising, such as tanning, leather-working, and saddlery Silk-weaving plays some part, however, and the growing of cotton has recently brought about in Turkistan the erection of cotton mills in which European machinery is used.

The largest towns of Central Asia are Tashkent, a tanning and cotton and silk weaving center; Askabad, the capital city of Transcaspia; Kokan, which has the best equipped bazaar in Russian Turkistan; Namangan, a fruit and cotton center; Samarkand, containing ruins of splendid palaces and mosques.

Bukhara. Bukhara is a State lying just north of the Afghanistan frontier, and covers an area of 80,000 square miles. It was founded by the Uzbegs in the 15th century. It practically lost its independence on the capture of Samarkand by the Russians in 1868. Though retaining its own ameer, it has been a vassal State of Russia since 1873, when a treaty was signed excluding all foreigners not provided with Russian passports. The people are Mohammedans, the dominant race being Turkish. The native army comprises about 10,000 men. Slavery has been abolished under Russian influence. The country produces corn, fruit, cotton, silk, wine, tobacco, and hemp. Sheep, horses, goats, and camels are raised, and gold, salt, alum, sulphur, and coal are among the minerals found. The city of Bukhara, the capital, formerly a noted center of learning, has cotton, leather, and silk industries. The exports are chiefly raw silk, cotton, rice, sheepskins, hides, fruit, and carpets.

Khiva. Khiva, having an area of 22,320 square miles, of which 5,200 square miles is fertile oasis, is a vassal State of Russia lying to the west of the Lower Amu, which here flows into Lake Aral. It was founded, like Bukhara, on the ruins of the Mongol empire in Central Asia. In 1873, on the pretext that it had aided the rebellious Kirghiz, it was conquered by Russia, to which government the Khan owes an annual tribute. The land is irrigated by means of canals from the Amu, and wheat, melons and other fruits, silk, cotton, and wool are produced. The capital, Khiva, is a cotton manufacturing center. Hazar Asp and Kungrad are pretty towns with local trade.

THE RUINED TOMB OF SULTAN SANGIAR, AT MERV

ASIATIC TURKEY

THE Ottoman dominions in Asia, in addition to suzerainty over the islands of Samos and Cyprus, comprise an area under direct Turkish rule of about 650,394 square miles, with a population of about 17,545,000, or twenty-seven to the square mile, more than two-thirds of whom are Mohammedans. The races include, in order of numbers, Turks, Syrians, Arabs, and Greeks, besides Kurds, Armenians, Circassians, and Jews. These dominions include the geographical regions of Asia Minor, Armenia, Mesopotamia, Syria, which includes Palestine, and Cyprus.

Anatolia. The most westerly part of Asia, consisting of a peninsula extending toward Europe from the highland region that farther to the east merges into the Iranian Plateau, is also known as Asia Minor. Its shores are washed by the Black Sea, Bosporus

ENTRANCE TO MOSQUE, SKUTARI

The suburbs of Constantinople extend to the Asiatic side of the Bosporus and for many miles along its banks. Skutari is opposite to Constantinople, and is the residence place for many of the wealthy people of the Turkish capital. Tourists often visit the Great Mosque.

Strait, Sea of Marmora, and Dardanelles Strait on the north, the Ægean Sea on the west, and the Mediterranean Sea on the south. In addition to Anatolia (area 194,389 square miles), the name Asia Minor is sometimes extended in application so as to include Armenia and Kurdistan. The surface of Asia Minor is in the main a plateau, rising toward the east. It is traversed by several mountain ranges, the Pontine along the northern coast, which varies greatly in height, and the Taurus (7,000 to 10,000 feet) along the southern coast. On its western face it is broken by broad valleys. West of the Anti-Taurus Range, which reaches northeast and southwest almost across the peninsula, is a great central plain containing a salt lake and having no navigable rivers. The chief streams of Anatolia are the Kizil Irmak and the Sakaria, which empty into the Black Sea, and the Seihun (Saron), Jihun, and the Menderez, all flowing into the Mediterranean.

Except on the southern and western coasts, where the temperature is moderated by sea breezes, Asia Minor has a trying climate, damp and enervating on the northern coast and severely hot or cold on the plateau. On the Pontine Mountains are fine forests of oak, fir, and beech. The Taurus and other ranges to the south are less densely wooded and the central regions are almost treeless. On the plateau is excellent wheat land, and various districts are fitted by soil and by climate for the culture of many semi-tropical products. The fauna includes the bear, panther, lynx, hyena, wolf, wild boar, chamois, deer, bustard, and pheasant. Mineral resources are abundant, but little developed. Marble is found in the Taurus ranges, where, indeed, it has been quarried for centuries. Coal is found at various points along the coast of the Black Sea. Copper is mined in the Anti-Taurus range, and salt is obtained so largely as to be an article of export.

Agriculture engages nearly all of the people, but, as in European Turkey, it is in a backward condition. Many of the inhabitants find occupation in mining and in the fisheries. The breeding of horses, Angora goats, and camels is followed on the plateau. The manufactures include silks, cottons, mohair cloth, carpets, sweetmeats, raisins, wine, soap, licorice, and copper utensils. Until within recent years the absence of good roads rendered transportation impossible except by means of camels or mules, thus hindering development, but the country now has several railways. In March, 1903, the Sultan granted permission for the building of a line through the Euphrates Valley, from Konieh to the Persian Gulf, by way of Adana, Mosul, and Bagdad, connecting with the line already operating between Konieh and Skutari. It is a German project. Smyrna, at the head of a deep gulf on the Ægean Sea, is the natural trade outlet for the western districts and the second seaport of the empire. It has given its name to the celebrated woolen rugs and carpets made by the people of the interior. Trebizond, on the Black Sea, is another important point of trade. The Turkish islands off the coast of Asia Minor include a number rich in mythical and historical associations. The chief industry of these islands is sponge fishing. Fruit, raisins, wine, olive-oil, and mastic are produced.

For administrative purposes Asia Minor is divided into eleven vilayets, ruled by Turkish governors. The fertile island of Samos (area 180 square miles), inhabited by Greek Christians, has been since 1832 an autonomous principality

SHORE OF THE BOSPORUS, AT BEIKOZ

At the distance of some miles from Constantinople the suburban settlements become merely a line of homes facing the waters of the strait from the hilly shores. In warm weather the water front is made a busy scene by the presence of gay boating parties. The land adjacent is usually under tillage or planted with vineyards.

tributary to Turkey, but under the protection of Great Britain, France, and Russia.

Armenia. The highly elevated region forming the northeastern portion of the Turkish territory in Asia is called Armenia, although that term indicates no precise boundaries, and the region has no distinct political identity. With Kurdistan its area is about 72,500 square miles. It is a plateau, traversed by bare ranges of mountains between which are broad valleys. Eastward the plateau continues into Persia. On the Persian border rises Mount Ararat, 17,325 feet high, the legendary resting place of Noah. On the south and southeast lies the hill country called Kurdistan, through which the plateau shades into the plains of Mesopotamia and Syria by a

MOUNDS ON THE SITE OF ANCIENT BABYLON

Where once stood the imperial city of Mesopotamia, with palaces and temples, are now only scattered ruins largely covered with earth. Desolation is characteristic of the ancient plains of the Euphrates and Tigris. In the earthen mounds European explorers have dug in search of traces of old cities. Here they have found gigantic works of architecture, remains of the magnificence of the Babylonian capital buried for centuries.

series of rugged terraces. On the north the plateau level makes an abrupt descent toward the Black Sea.

On this elevated region lives a mixture of races of various religions and modes of life. The Armenians, descendants of the ancient inhabitants of the country, are Christians. With them live Kurds, people of Mohammedan tribes that have forced their way into the region within historical times. A small sprinkling of Ottoman Turks forms an official class. The principal occupation of the inhabitants is stock raising, the wide expanse of grassy, treeless hillsides and unsettled country making this an appropriate work. Sheep, horses, and mules are bred and sold to the lowland people of adjacent districts, while wool, hides, and fur are exported by the caravan routes. Agriculture is not well developed, although climate and soil make progress possible. While the winters are long and severe on the upper levels, the summers are dry and hot. Cereals and hardy fruits defy the changing seasons and grow finely. Vineyards, properly cared for, flourish during the warm season at higher altitudes than European cultivators have been able to use for that work. On the lower levels of Armenia the climate approaches more toward tropical warmth. Here rice and fruit are successfully grown.

Mesopotamia. The biblical Aram Naharaim, the great valley plain of the Euphrates and Tigris rivers and the seat of the ancient empires of Assyria and Babylon, known generally as Mesopotamia, stretches southeast from Armenia to the head of the Persian Gulf. Its area is about 100,205 square miles. Its chief river, the Euphrates, is the largest stream of Western Asia. Rising in the Armenian Mountains, it flows southwest until it crosses the Taurus range, thence southeast, uniting with the Tigris at Korna, whence the united rivers, under the name of Shat-el-Arab, have a course of ninety miles until they empty into the Persian Gulf. The total length of the Euphrates is 1,800 miles. The Tigris, the next important river, rising in Northwestern Kurdistan, flows in a course which is largely parallel to the Euphrates, until the two streams join their waters. The Tigris is 1,150 miles long, is navigable to Mosul at all seasons, and higher at flood time. The Great and Little Zab rivers, flowing from the Zagros Mountains westward, are the largest affluents of the Tigris. The upper portion of the Mesopotamian plain is broken by low hills. Its lower part, ancient Babylonia, formerly well irrigated and fertile but now swampy and unhealthful, is mainly alluvial. In summer the climate is extremely hot, but in winter pleasant.

Overland trade between the western districts near the Mediterranean and the Persian cities at the east is by mule or camel, and a considerable traffic also is carried on by rafts of inflated sheepskins down the Tigris River from Diarbekr to Bagdad, the city of Harun al-Rashid. From this center of exchange, goods move by steamer to the great Persian Gulf seaport of Busra (Bassorah) on the Shat-el-Arab. The Euphrates River is not navigable except in flood time. The chief exports are cereals, dates, wool, gum, rice, and hides. Opposite Mosul, on the plain east of the Tigris River, are the mounds of Nineveh. East of the Euphrates River, not far from Nejef and Kerbela, are the mounds of Babylon.

The vilayets of the Mesopotamian region are three in number. The most northern is Mosul, which extends into the district called Kurdistan. It is an interior region of little political importance, though large in area. Formerly the capital city was a great caravan depot, but trade has decreased. From Mosul comes the term muslin

THE TEMPLE OF THE SUN, BAALBEK

The old Roman Temple, built by imperial order in the 2d century, still shows much of its former completeness. Its great stone columns are each forty-six feet in height, and are best preserved on the northern and western sides. The edifice stood on a hilltop exposed to the rays of the Sun God as he made his daily journey from his rising in the east to his setting in the west. From the valleys below came the worshipers to do the Sun God honor.

JAFFA, THE SEAPORT OF PALESTINE

This ancient city, more familiar to Bible readers under the older form of Joppa, is the gateway of the Holy Land for those travelers who come by sea. On approaching the city the yellow coast line resolves itself slowly into a mass of oriental buildings, rising like terraces upon the hillside. On closer view the narrow streets are visible. There is no harbor and the steamers can not land in rough weather. It was from Jaffa that Hiram, King of Tyre, sent the cedar wood of Lebanon to King Solomon for the building of the great Temple.

as applied to a cloth fabric. This region has excellent soil but needs irrigation to become fruitful. Wheat, barley, lentils, sesame, figs, rice, cotton, hemp, tobacco, peas, and beans are among the agricultural products that grow readily in the district when given moisture.

Below Mosul lies the vilayet of Bagdad, mainly a region of arid, treeless plains marked with occasional swamps or lagoons, and covered with scanty steppe vegetation. Limited oasis regions have the date palm, but there are no forest areas. Over these wastes roam wild swine, hyenas, jackals, wolves, cheetahs, foxes, and antelopes; while around the swamp areas are flocks of pelicans and flamingoes. Bagdad, the capital, like Mosul, has declined much from its former importance as a caravan depot, but it still exports considerable quantities of dates, wool, grain, cloth, drugs, and dye-stuffs, besides being a horse market. The city is a military post of the Turkish army.

The most southern part of modern Mesopotamia is the vilayet of Busra, extending to the shores of the Persian Gulf and including the lower valleys of the Euphrates and Tigris. Its physical features are similar to those of the Bagdad district, being arid wastes with occasional oases and swamp regions. The capital city, although some seventy miles from the Persian Gulf, is a seaport, the river being navigable for vessels of ordinary draught. Arabian and European ships make the city a depot for the wares of Arabia, Persia, and India, and commerce with the interior is maintained over caravan routes to Bagdad and Aleppo. Extensive groves of date palms around the city furnish the chief article of export.

VIEW OVERLOOKING BEIRUT, SYRIA

As capital of a vilayet, Beirut is the seat of a governor and military garrison. The city is located on the slopes extending from the mountains to the sea. In the distance, when viewed from the west, is the snow-clad peak of the Sannin. The population of Beirut is about two-thirds Christian. The city is a center for missionary work and is the distributing point of the Syrian book-trade. Europeans find the locality pleasing and have settled at Beirut in large numbers. The Moslem population is gradually removing.

Syria and Palestine. Syria, which includes Palestine, extends eastward from the Mediterranean Sea to the Euphrates Valley and the ill-defined borders of the Arabian Desert, and northward from Egypt to about 37° N. lat., where the basin of the Jihun River separates it from Anatolia. Its area is 109,509 square miles; its population comprises Bedouins, Arabs, Druses, Maronites, Jacobites, Jews, and Greeks. Arabic is commonly spoken and 80 per cent of the people are Mohammedans. Colonies of Germans, Jews, and Circassians have been established during the last thirty years, and Palestine is dotted with Greek, Latin, and Russian monasteries.

Physically the country falls into three divisions: (1) A coastal plain; (2) two parallel mountain ranges running north and south, between which is a remarkable depression, sinking below sea-level;

contains the sepulcher of Jesus and the rock from which Mohammed is said to have ascended to heaven, and the city is sacred alike to Christians, Jews, and Mohammedans. Beirut, chief port of Syria, is connected by rail with Damascus, the largest city, on the edge of the desert near Mount Hermon. It is the seat of a Protestant college and has other excellent schools and colleges. Railways are under construction from Damascus to Acre and to Mecca. Palestine proper, the Holy Land, comprises the separate mutessarifat of Jerusalem and parts of the vilayets of Beirut and Damascus. By virtue of its being the cradle of Christianity, it will always hold a prominent place in the affections of the Christian world. Its area is about 11,000 square miles.

THE ROAD TO BETHLEHEM

Leaving Jerusalem by the Jaffa Gate, the Citadel, called the "Castle of David," is at the left. Tradition says that King David's fortress was at this point, but the walls now seen date from the 16th century. Passing the old moat the Bethlehem road descends into the Valley of Hinnom.

THE WAILING PLACE OF THE JEWS, JERUSALEM

Just outside the ancient limits of the city is a wall fifty-two yards long composed of huge blocks of quarried stone. It is the scene of a Jewish ceremony which has been customary since the Middle Ages. Members of the old faith, from all parts of the world, gather here to kiss the walls of the ancient city and bewail the downfall of Hebrew nationality. Many Jewish pilgrims spend hours on this spot reading the holy books and repeating their devotional ritual.

and (3) a plateau sloping eastward to the Euphrates Valley and the Arabian Desert. The coastal plain is narrow at the north, but widens at the south into the plains of Sharon and Philistia. Of the two parallel ranges the western includes, in the north, the mountains of Lebanon, crossed by only one good pass and culminating in the Dhor-el-Khodib (10,625 feet). The valley between the ranges extends from the extreme north to the Red Sea and marks the course of the chief rivers—the Orontes (Nahr el A'asy) in the north; the Nahr-el-Litani (Leontes), which empties into the Mediterranean Sea; and the Jordan, which, rising west of Mount Hermon (9,050 feet), flows south through Lake Huleh and thence below sea-level through the Sea of Tiberias (Galilee, Gennesaret) into the Dead Sea. The latter is 1,292 feet below the level of the Mediterranean, has no outlet, is extremely salt, and produces bitumen and bromine.

North of Aleppo, the eastern plateau is undulating and well watered, but below that point it widens into a scantily watered pastoral district, the Syrian Desert, merging at the south into Arabia. It is intensely hot in summer. Within the valley of the Jordan the climate and vegetation are subtropical. In the maritime and hill regions the climate resembles that of Southern Italy. Snow falls occasionally as far south as Jerusalem. There are no large forests and the once famous cedars of Lebanon are now represented by small groves. On the coast and upland plains wheat and corn are grown; the olive, vine, and fig are cultivated in the hills; and pasturage for sheep and goats is found on the slopes of the eastern plateau. Agriculture is the chief industry, but silk and other textiles, soap, and articles sold to travelers are manufactured.

A railway, opened in 1892, connects the port of Yafa or Jaffa (Joppa) with the sacred city of Jerusalem, in the heart of Judea. Jerusalem, the site of the ancient Temple of Solomon and the scene of the culmination of the career of Jesus,

THE VALLEY OF JEHOSHAPHAT

East of Jerusalem is the vale where, Moslems say, the last judgment will occur. The so-called Tomb of Absalom at the left and the Tomb of Zacharias at the right are ancient sepulchers of Græco-Roman origin.

Cyprus. The island of Cyprus, the Chittim of Scripture, was taken by the Turks from the Venetians in 1571. It lies in the Mediterranean Sea, sixty miles off the coast of Asia Minor and forty-one miles off the coast of Syria, with which, as also with Alexandria, about 238 miles distant, it is connected by submarine telegraph cable. The island pays Turkey an annual tribute of over $450,000. In virtue, however, of the convention of June 4, 1878, whereby England undertook to defend the Turkish dominions in Asia, Cyprus remains under British administration for so long a time as Russia shall hold Batum and Kars.

The area of Cyprus is 3,584 square miles. Of its population, about one-fifth are Mohammedans, the remainder being chiefly Orthodox Greeks. In outline the main part of the island is an irregular parallelogram, 100 miles long and from thirty to sixty miles wide, from which a peninsula juts out forty miles to the northeast, with a breadth of about six miles. Mountain ranges skirt the northern and southern shores, the northern range culminating in the peak of Buffavento (3,140 feet). The southern range (Troodos, or Olympus, altitude 6,406 feet) is well wooded.

The mountain regions are cool and healthful. The only streams are winter torrents, but there are a few salt lakes. The soil is notably fertile. Wheat, barley, wines and spirits, sesame, linseed, silk, fruits, olives, carobs, cotton, wool, hides, cheese, aniseed, sponges, sumac leaves, and terra-umbra are the principal products. The chief towns are the capital, Nikosia, on the central plain; Famagusta, on the eastern coast; Larnaka, the commercial emporium, and Limasol, on the southern coast.

THE DEAD SEA, PALESTINE

This inland lake, lying between steep limestone cliffs, is 1,310 feet deep and has a length of forty-seven miles. In its waters no organic life can exist and its shores are barren because of lack of the fresh water needed by plants.

Historical. In Mesopotamia was the seat of the ancient civilization of Chaldea, Babylon, and Assyria, and its princely cities were the capitals of ancient empires that extended from the plains of Persia on the east to the Mediterranean on the west. Finally overthrown by the northern kings of the Medo-Persian dynasty the line of native monarchs which had long reigned at Babylon ended, and Mesopotamia lay for centuries under the successive rule of Persians, Macedonians, Seleucid Greeks, Parthians, Persian Sassanides, and Saracens. Babylon, meanwhile, had passed away, and when the Saracen caliphs in the 8th century chose the region as their seat of power they built the city of Bagdad for their capital. Here in the 9th century reigned the famous Harun-al-Rashid under whom Bagdad was one of the richest and greatest cities of Asia. In the 15th century Mongol tribes from the north overthrew the Saracens, and Turkish invaders followed. The region passed under the Ottoman rule in 1638, conquered by Sultan Murad IV.

In the earliest days the Hittites held sway in Northern Syria, while Palestine comprised a number of petty states. Later the Phœnician cities of Tyre and Sidon acquired a world-wide fame. The ancient inhabitants of Palestine, the Canaanites, were conquered by the Israelites, who established a kingdom that attained its widest extent under King Solomon (10th century B. C.). The whole country became subject to Assyria in the 8th century B. C., and later to Babylon, to Persia, and to Macedonia. It was conquered by Pompey (64 B. C.) and became part of the Roman Empire. In the 7th century A. D. it was taken by the Saracens and was later devastated by Seljuk and Tartar invasions. Moslem cruelties to Christians in the 11th century led to the Crusades and to the establishment of a short-lived Latin kingdom at Jerusalem in 1099. The Turks acquired the country from the Egyptian Mamelukes in 1516.

In ancient times Asia Minor was the seat of the early kingdoms of Troy, Phrygia, and Lydia, and a scene of Ionian Greek civilization. By position it was the natural battleground of the East and West, and its possession has been disputed by Persia, Macedonia, Syria, Rome, the Byzantine Empire, Parthia, the Saracens, the Seljuks, and the Ottomans. Between the 11th and the 15th centuries bands of nomad Turks, Mongols, and Tartars swept over the country, spreading a devastation from which it has never recovered.

CHURCH OF THE HOLY SEPULCHER

The exact site of Golgotha is an uncertain matter, but in the 4th century Empress Helena found a spot which she believed to be the tomb of the Christ. Over it she erected a church. The present edifice, built in the 12th century, is on the spot chosen by the Empress, and is devoutly visited by Christians of all nations.

The mountain people of Armenia had, some centuries ago, monarchs of their own, and although ruled since the 7th century by Mohammedans, they have never lost their racial distinctness or their attachment to Christianity. Stimulated by the successful efforts made toward autonomy by the Christians of the European Turkish provinces the Armenians, at various times in the 19th century made efforts toward revolt with the hope of European protection. The Turkish government, however, crushed the revolts with great severity, several frightful massacres taking place at the chief centers of Armenian disloyalty during the times of trouble.

PATRIARCH'S POND, JERUSALEM

An artificial reservoir lying ten feet below the street level is traditionally said to have been built by King Hezekiah, but the legend is doubted. Typical oriental houses now stand closely around its margin.

ARABIA

The peninsula of Arabia, more than one-third the size of Europe, is bounded on the west by the Red Sea, on the south by the Indian Ocean, and on the east by the Persian Gulf. On the north it merges into Syria along an ill-defined boundary corresponding in general with the parallel of 30° N. The inhabitants are nearly all Mohammedans, their wealth consisting of horses, camels, asses, and mules. About one-third of the country is a sandy desert; but in the interior, which is elevated, are extensive tracts affording good pasturage.

Physiography. Northeast of Medina is an upland of volcanic origin, which is a watershed between the basins of the Red Sea and Persian Gulf. Eastward from it extends the valley of the Wadi e' Rumma, separating the great plateaus of the interior. North of this lies the Nejd district,

covered with pasture-lands and irrigated valleys and bordered with sandy wastes. There are few permanent rivers, the streams disappearing in the sand. The climate is remarkably salubrious, the air being dry and equable in temperature. The rainy season lasts five or six weeks from the end of August.

Politically Nejd is now divided into two states, one ruled by the Emir of Jebel Shammer, and the other by the Emir of Riad. During the middle of the 19th century all this territory was united under the Wahabi Kingdom, which extended from the Persian Gulf across to the shores of the Red Sea, but political unity broke down in 1870–71. South of the Nejd lies the great interior plateau of the Akaba, an immense flat plain, waterless and almost uninhabitable. Over its wastes roam a few clans of nomad Bedouins, whose political relations among themselves are not well known. The southern portion of independent Arabia is termed Hadramut. Along the seacoast this section shows an arid shore line, but farther inland is a great interior valley parallel with the coast, inhabited by tribes under the Sultan of Shibam. This region was the ancient source of frankincense and myrrh, and is still productive.

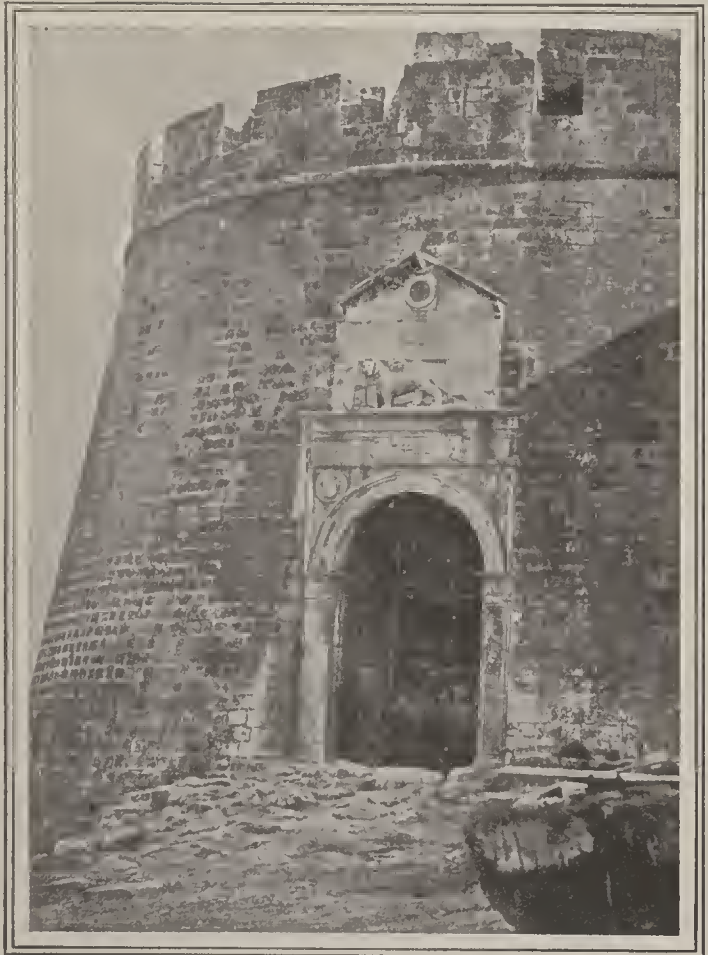
BANKS OF THE RIVER JORDAN

In the autumn when the volume of water is small it is easy to ford the ancient stream at a few places. Travelers in the Holy Land usually visit certain favored points near the usual highways, but elsewhere the inhabitants are able to water their flocks without meeting intruders.

TEMPLE OF DIOCLETIAN, PALMYRA

Among the many ruins of the ancient city of the desert, one of the prettiest is the temple named after a Roman emperor. The six columns of the porch are still in place with the entablature above them, but the roof has fallen in, and the interior has only bare walls.

Oman. An independent state on the east coast of Arabia exists under the protection of Great Britain. Its area is 82,000 square miles, and its population is estimated at 1,500,000. It is ruled by an Imam, whose capital is Maskat. The exports of Oman are dates, limes, and other fruits, pearls, mother-of-pearl, fish, and salt. Copper and sulphur deposits are worked to a limited extent. The existence of a fertile coastal plain suitable for agricultural work is assured by a chain of mountains which runs parallel to the coast at a distance of five to fifty miles inland, protecting the coast region from the encroachment of the interior desert. Politically the region is important because it possesses strategic points from which European military or naval posts might dominate the Gulf of Persia. Oman was formerly a powerful state, with possessions at Zanzibar, East Africa, and in Baluchistan.



OLD TOWER, CYPRUS

At Famagusta, on the eastern side of the island, are several ruins dating from the Venetian possession of that port. The Torre de Moro still shows over its entrance the sculptured lion of St. Mark, emblem of former rule by the great trading city.

Turkish Arabia. The Ottoman territory comprises a strip on the Red Sea coast from sixty to 150 miles wide (area 173,700 square miles), of which the upper and larger portion is the province of Hejáz, the lower, Yemen; and a low-lying strip on the Persian Gulf coast north of Oman known as El Haza (area about 31,000 square miles). Mecca, at the southern end of Hejáz, about fifty miles from its seaport of Jedda on the Red Sea, is the birthplace of Mohammed, and to it all the faithful must make one pilgrimage. The character of this city as the chief shrine of the Mohammedan world makes it one of the important cities of Asia despite its relatively small size. It has no manufactures except the carving of chaplets for pilgrims, and it is not the center of an agricultural region. Its residents live by serving the multitudes of devotees who stream to it each year from all lands where Mohammedanism has a foothold. Christians may not enter the city. Medina, whither the Prophet fled from Mecca A. D. 622, from which year Mohammedans reckon dates, and where he died ten years later, lies 255 miles north of Mecca and has its seaport at Yembo. While the climate, except in the coast districts, is healthful, the unsanitary condition of the holy cities is a fruitful source of epidemics of cholera and plague. Yemen is the most fertile district of Arabia. Sana, the capital (7,600 feet above the sea), has its seaport at Hodaida, whence are shipped hides and the celebrated Mokha (Mocha) coffee. Donkeys and broad-tailed sheep are bred in Yemen and El Haza, and goats in Hejáz. Dates, coffee, and spices are grown for export. Senna, balsam, incense, and indigo are cultivated, and the cocoanut, betel nut, and banana have been successfully introduced from India. The Turkish conquests in Arabia date from 1870–71.

British Arabia. This comprises Aden, a strongly fortified coaling station commanding the Red Sea route; the island of Sokotra; Perim, a small island coaling station for merchantmen at the entrance to the Red Sea, and the Kuria Muria islets where the Red Sea cable touches. British power protects various tribes along the southern coast, as well as Oman. These acquisitions have been made chiefly for the convenience of the maritime trade between England and India.

PERSIA AND AFGHANISTAN

PERSIA

PERSIA, the "Land of the Lion and the Sun"—the *Pars* or *Fars* of Ezekiel, called by the natives *Iran*—occupies the western and larger portion of the great plateau that stretches southwestward from the Pamirs to the Persian Gulf and Tigris basin. Its estimated area is 628,000 square miles. Persia is, by geographical position, a meeting-ground of antagonistic political and commercial interests. The Caspian Sea, which, with Russian territory, forms the northern boundary of Persia, is wholly under Muscovite influence. The Persian Gulf on the south is dominated by the British Government. On the eastern border lie Afghanistan, which is under British influence, and Baluchistan; while to the west lie the Turkish regions known as Armenia, Kurdistan, and Mesopotamia.

THE SHAH OF PERSIA

Muzaffar-ed-din, reigning Shah of Persia, who succeeded his father in 1896, is the fifth sovereign of the dynasty of the Kajârs, which came into power at the close of a civil war that extended from 1779 to 1794.

Mountains and Rivers. The greater part of Persia is a table-land from 4,000 to 8,000 feet in elevation, encircled, except on the east, by mountains. On the north the Elburz range, a spur of the Caucasus mountains, marks the frontier with a line of bold, steep peaks, and parallels the shore of the Caspian Sea for miles. The general level of these peaks is 12,000 feet, the highest, Mt. Demavend, reaching an altitude of more than 18,000 feet. Two offshoots of the Elburz are the Savalan-dagh, in Azerbaijan, and the Zagros range, the latter passing along the western border of the table-land. On the south, the plateau is separated from the Persian Gulf by several parallel ridges, crossed by rocky valleys. Spurs from these ranges extend across the plateau, between which are wide plains, and here and there fertile valleys, but the central and eastern parts of the table-land are little more than a salt desert, on which there are oases that are tilled and inhabited, it is true, but these are few and of limited area. The southern part of Persia is a burning waste of sand throughout nearly its whole vast extent.

The Elburz range is largely formed of primitive rocks, and the spurs of this chain usually have limestone and schist on their eastern and southern ledges, and granitic rocks on the north. The table-land of Azerbaijan has a foundation of volcanic rock, and Mt. Demavend is an extinct volcano. In the Savalan-dagh, limestone deposits are found, and in the Elburz range, rich veins of iron and coal.

An enormous extent of Persia must depend wholly for irrigation upon the mountains which gather rain and snow, for this vast country is remarkably deficient in rivers. In the northern part, a number of streams flow from the Elburz heights into the Caspian Sea, but all are so short that they are little more than mountain torrents. The only rivers of any extent in the entire country are two branches of the Tigris, the Karun, whose headwaters are in the Bakhtiari range, and the Kerkha, flowing from the Kurdistan mountains. Practically the only navigable river is the Karun, on which steamers can ascend to Shuster, but only vessels flying the Persian flag can go above Ahwaz.

There are many separate drainage areas in the country. About 130,000 square miles along the sea and Persian Gulf empty directly into those waters, while another area, comprising 100,000 square miles, drains into the Caspian and Aral at the north. Lake Urumia, in the northwest, and Lake Seistan, near the eastern border, serve as drainage points for about 60,000 square miles. But outside of these, which include about one-half the area of the country, there is an immense interior region, including the Great Salt Desert, whose scanty water supply passes into small swamps or lakes or else disappears in the desert sands. The salt swamps of Persia are interesting features of its physiography. They are bogs of slimy mud, formed at the lower levels of the interior drainage areas. Where the amount of surface drainage is too small to form a lake there exists a swamp, which fills or dries with the seasons. In winter the rainfall may flood the region, but in summer the traveler finds a vast wilderness of barren, salt-covered plains dotted with mud-flats. The Great Salt Desert is a vast swamp area of this kind. These districts are unfit to support population and remain desolate wastes.

THE PALACE OF THE SHAH, TEHERAN

On the southern side of the Tup Meidan, the principal public square at Teheran, is a vast collection of courts, baths, gardens, and buildings, virtually a city within itself. Within a large tree-planted courtyard stands a handsome edifice, across the center of which extend heavy curtains concealing an open throne-room and the famous white marble throne. Upon this throne, on certain public occasions, the Shah displays himself to the people.

Climate. The climate varies according to latitude and elevation. In the northern districts, near the Caspian, rain is frequent. As a result the summers are excessively warm and disagreeable, because of the humidity, while the winters are damp and cold. On the great Iranian plateau the air is very dry. Here, on account of the elevation, the winters are intensely cold, but yet bearable to persons from temperate latitudes. The summers are warm, dry, and pleasant. In the lower plains of the south and east the winters are agreeable, but the summers are parching with their intense heat. Inhabitants sleep in the open air, using the house tops for that purpose, in the cities.

The fauna includes the tiger, lion, leopard, lynx, wolf, jackal, wild ass, wild sheep, deer, partridge, grouse, and bustard. Domestic animals include horses,

HOME OF A WEALTHY PERSIAN

Among the wealthier classes the dwellings in their interiors are marvels of luxury and elegance, and the gardens attached to them are famed for their exquisite beauty, roses, for which the Persian gardens are celebrated, growing in the greatest profusion. In accordance with oriental custom, the women's apartments form a distinct portion in each residence, closed off from the main part.

mules, and camels for transportation, and oxen for tilling. The so-called Arab steed of the Persian Gulf region is not pure Arab, but is a serviceable animal of some reputation. The horses bred by the Turkomans of Khorassan are capable of great endurance. Both of these breeds are marketed in British India. The breeders of Khorassan have also developed a special breed of draught camel that is deemed valuable in oriental countries. Europe knows the fauna of Persia only through the beautiful Angora cats, many of which are bred at Ispahan.

Natural Resources. Persia has a productive soil, except in the areas of the salt-swamps, but the lack of irrigation has made unproductive wastes of much really good land. Where cultivation has been developed by labor, wheat, barley, and other cereals have been excellent, while sugar cane and rice have done well in the watered areas. Generally speaking, however, the crops that require least water have been most popular among Persian cultivators. Opium, cotton, and tobacco are grown in certain districts in quantities sufficient for export. In Ghilan, southwest of the Caspian, are famous mulberry plantations, grown for silk culture. Tea plantations have been started in the same district, with promising results. Persian wines have an excellent reputation, and vineyards are abundant, but the product is chiefly for local consumption. Fruits are grown in variety and abundance, and form no small part of the food of the people. The most natural industry for the Persian people is that of stock-raising, and the grassy valleys of the watered areas have their complement of pastoral people. The wool of caravan commerce is of Persian production, Khorassan having the best quality of output. About two-thirds of the wool export from Persia goes to France and the remainder chiefly to British India. There is no question that scientific irrigation and good roads would enable Persian products to enter the markets of the world with marked success.

ONE OF THE GATES AT TEHERAN

The walls of Teheran are pierced by twelve gates or lofty archways adorned with pinnacles and towers, which present a showy appearance from a distance and call forth many expressions of admiration from incoming travelers. On nearer view, however, they are apt to prove disappointing, being covered with floridly colored tiles in inartistic designs.

The lowland strip along the Caspian Sea is covered with forests of oak, beech, birch, elm, walnut, sycamore, and ash, but these timber areas have no commercial importance as yet. Application of scientific methods might also develop the mineral products of Persia, such as salt, iron, coal, copper, lead, antimony, sulphur, and marble. An important resource is found in the turquoise mines in Khorassan, which have been worked for centuries, and yield magnificent specimens. The mineral wealth of Persia is little developed, because of lack of transportation facilities. The pearl-fishing industry in the Persian Gulf, centered chiefly at Bahrein and Lingah, is the most valuable in the world. Bahrein, or Ava Island, is a coral formation in the Persian Gulf near the Arabian coast, ruled by a local sheik under English protection. This place is a rendezvous for about four hundred boats engaged in pearl fishing. Lingah is a seaport on the Gulf, and has shipbuilding work as well as foreign trade.

Industries and Trade. Persia manufactures silks, rugs, and carpets. The Persians excel in their dyes and in their brocade and embroidery. Persian carpets have distinctive features varying with the districts in which they are made. Kurdistan, Khorassan, Feraghan, and Kerman have excellent results with their products of hand work, often

PUL-I-KHAJU, ISPAHAN

The Pul-i-Khaju, or Bridge of Khaju, one of the historic works of the Sufi rulers, spans the Zaïnde-rud at Ispahan, and is a handsome, double-storied stone structure of very original construction. Usually the river at this point is little more than a chain of pools, but during the "sale ab," or rise of the waters in spring, it becomes a seething torrent. Then the Pul-i-Khaju, thronged with an excited crowd of sightseers, is the center of an animated and interesting scene.

employing whole families for long periods of time, no two carpets being exactly alike in design. Another native industry, especially in Kerman, is the manufacture of shawls woven by hand out of goats' wool. Ispahan and Yezd are famed for their *namads* or heavy woolen felts. Other manufactures include cotton and woolen fabrics, ornamental swords, brass and copper vessels, carved and inlaid work of metal and wood.

The chief exports are dates, figs, and other dried fruits, opium, cotton and wool, silk, carpets, pearls, and turquoises. Imports are mainly cotton fabrics, woolen goods, carriages, sugar, petroleum, and drugs. The commerce of Northern Persia is controlled chiefly by Russia. The Persian Gulf trade, exclusive of what passes up the Shat-el-Arab to Busra, is mainly with India and the United Kingdom. There are no railways in Persia except a Belgian six-mile line at Teheran, opened in July, 1888, and a line twelve miles in length between Amol and Mahmudabad; but a road from Julfa to Tabriz, with a branch to Teheran, is now (1904) in process of construction, and other roads are contemplated under Russian supervision.

PARSI PRIESTS

The Parsis are modern followers of the ancient Persian religion. Their priests still tend the sacred fire said to have been brought by Zoroaster from heaven.

NATIVE BOATS OF THE COAST STREAMS

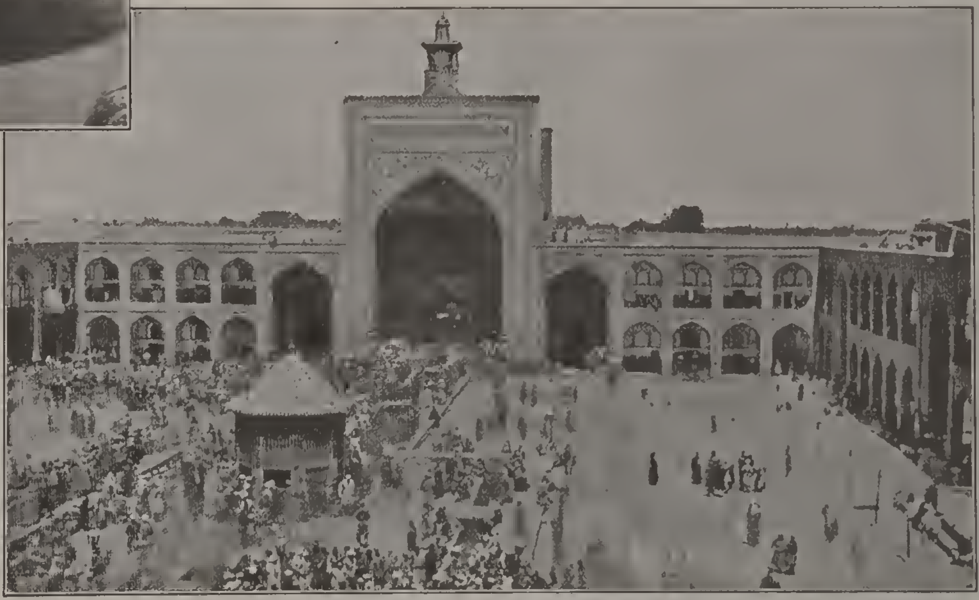
The native craft that ply on Persian waters are remarkable chiefly for the oddity of their appearance. Among these boats none is more picturesque than the couffah, practically a large round basket woven of osiers, the exterior covered with bitumen. The owners of these queer craft show astonishing skill in handling them in the treacherous currents of the streams.

Traveling in Persia is still mainly by post-horses and caravans, and transport is by pack animals. The only roads in Persia that are fit for wagon traffic are those from Teheran to Koom, and from Teheran through Kazvin to Enzelli, the latter being kept in order by Russian capitalists. The English have a trade route up the river Kurun by steamer to Ahwaz and thence to Ispahan by a caravan road. Persia has about 7,000 miles of telegraph wires, mostly constructed and maintained by English capital. The lines connect the principal cities with the seat of government, and are joined to the telegraph system of British India. There is a postal service under control of Belgians, which includes about 100 post offices, and has connections with the services of Russia and India.

People and Cities. The early inhabitants of Persia were Aryans, but the original stock has been modified by admixture with Mongols, Tartars, Arabs, Afghans, and Baluchis. The people are divided into two great classes, dwellers in towns or villages and nomads or dwellers in tents. The latter include Arabs, Kurds, Lurs, Gypsies, and Turks. Of the population about 90 per cent are Mohammedans of the Shiah sect. The Persian has naturally a higher order of physical and mental endowment, and is less a slave to custom than the Turk, but the priesthood, or "ulema," is very powerful and so conservative as seriously to restrict progress.

The cities of Persia are, as a rule, poorly built, with narrow, ill-paved streets. Teheran became the capital in 1788. It is on a riverless plain at the southern foot of the Elburz Range, about seventy miles from the Caspian Sea. Tabriz, in the northwest near the Turkish and Russian frontiers, is the commercial metropolis, and since 1805 the residence of the heir-apparent. Ispahan, the former capital, stands in a fertile plain in the center of the country and is the second commercial city. Mashhad (Meshed) is the capital of Khorassan and a place of pilgrimage. Yezd, in the center of the country, is the chief seat of the Parsis or Guebers. Kerman, in the interior, is a meeting-place of trade routes between the Persian Gulf and Central Asia. Shiraz, the ancient Persis, in the southwest, is traditionally famed for its roses, wines, and nightingales.

Government and Education. The government of Persia is a hereditary absolute monarchy. The Shah, officially titled Shâhinshâh, "King of Kings," is master of the lives and goods of all his subjects, and his will is the acknowledged law of the State; but, as in Turkey, no law promulgated may contravene the doctrines of the Mohammedan religion. The Shah is regarded as the head of the Mohammedan system by a very large part of the Mohammedan population who live under his rule. Formerly the methods of government were very crude, but since 1897 the Shah has had a responsible ministry after the European model. The country is divided into thirty-three provinces, each under a Hakim, or Governor-General, who can nominate the Lieutenant-Governors of the districts in his province. The chief duty of the officials is to attend to the collection of the revenue.



SHRINE OF IMAM RAZA, MASHHAD

In the 9th century Ali Raza, the Imam or spiritual head of one branch of the Mohammedan religion, was adopted by the temporal ruler as his heir but died soon afterward under circumstances that indicated poisoning. Over his tomb arose a magnificent shrine and around it a city called Mashhad, "Place of Martyrdom." Within the shrine are several large open courts surrounded by the great arched doors and windows of the enclosing walls.

Justice, which is dispensed summarily, is administered by the governors and their representatives, according to the unwritten or common law, or by the Sheikhs ul Islam or chief judges and the priesthood, according to the written or divine law. Since 1888 all subjects have been punishable, except as regards liberty of property, only by operation of law. The standing army of Persia has been organized under European officers, but is of uncertain value as a military force. There is a navy of two vessels.

Education is supported by the State, but the greater part of the people merely learn to read the Koran. Private tutors are employed by all families that have the means. A polytechnic school with some European professors has been in operation in Teheran since 1849. Within the past few years primary schools with modern methods of teaching have been opened at the capital and elsewhere.

Historical. A Persian monarchy is said to have been founded in the 7th century B. C., and Cyrus the Great in the 6th century subdued the Medes. Under Cyrus and his successors the Persian dominion was extended from Western India to Egypt. Darius and his son Xerxes unsuccessfully attempted to conquer Greece. The Medo-Persian Empire was finally subdued by Alexander the Great about 333 B. C. and became part of the Macedonian Empire. About the middle of the 3d century B. C. the Parthians in Khorassan acquired supremacy and ruled about 600 years over the Persian regions. Next came the dynasty of the Sassanides. They, however, gave way in turn to the Mohammedan Arabs in 639, under whom the ancient Zoroastrian religion of the Fire-Worshipers was almost extirpated. In the 11th century the Turkish Seljuks established their dominance over Persia. Early in the 13th century the Mongol conqueror, Genghis Khan, subdued the country, and toward the end of the 14th century Tamerlane also overran Persia. His successors ruled until the end of the 15th century when they were supplanted by the Sufi dynasty, founded by Ismail I. (1499–1527), which reached its greatest prosperity under Abbas the Great (1586–1628). In 1736 the throne was seized by Nadir Shah, who extended his dominions over a part of India in 1738, but after his death in 1747 the empire fell into pieces. Anarchy prevailed until 1794, when Agha Mohammed, chief of Astrabad, made himself supreme and founded the Kajar dynasty, of which the present ruler, Muzaffer-ed-dîn, who succeeded to the throne on the assassination of his father, the Shah Nasr-ed-dîn, May 1, 1896, is the fifth representative.

THE AFGHAN AMEER

Habibullah Khan, regnant at Kabul since 1901, is a Mohammedan autocrat under British influence. His small but warlike State is important because it guards the route to India from the west.

AFGHANISTAN

Afghanistan derives its importance from its geographical position as a "buffer State" between British India and the Russian dominions in Central Asia. Commercially it has comparatively little significance. The country lies between 30° and 38° 20′ N. lat. and 60° 30′ and 74° 30′ E. long. On the west it is bounded by Persia and on the north by the Russian dependencies, a part of the frontier being formed by the Amu (Oxus) River. On the south and east the region is bordered by tracts of country under control of the Government of India. The demarcation of the Indian-Afghan boundary was carried out in 1896 by commissioners of the two Governments, the frontier being marked by natural features of the region. Afghanistan has a length of 600 miles and an extreme breadth, from north to south, of 500 miles. The area is estimated at 215,000 to 270,000 square miles.

ROAD TO SOLOMON'S THRONE

Between high cliffs on the border east of Kandahar, Hindu and Mohammedan pilgrims climb to a shrine at the spot where, legends say, King Solomon stopped his retinue and took a last look over India, as he went homeward with an Eastern bride.

Physical Features and Climate. The general characteristics of Afghanistan are elevated table-lands of sterile surface, broken by ranges of rocky hills, between which are spaces, often stony and arid. The average level of the plateau is over 4,000 feet. On the north, Afghanistan is separated from Russian Turkistan by the Hindu Kush Mountains, whose peaks reach a level of 20,500 feet, and thence rocky ranges extend south, east, and west across the central plateau. In spite of the generally arid character of the plains between the ranges, there are a few fertile valleys along the courses of the rivers. Among the larger rivers of Afghanistan are: the Kabul which rises at a height of 8,400 feet, and flowing eastward 320 miles empties into the Indus; the Helmand, flowing southwest through the central table-land for 650 miles and emptying its waters into a lake in the swampy district of Seistan, and the Heri-Rud, whose source is 12,000 feet above the sea, and which flows west for many miles, then north into Persia.

The climate of Afghanistan is severe, being hot and dry in the summer, with blistering sand-storms in the southwest. It is cold and stormy in winter. Rainfall is deficient and irrigation is necessary. There are usually two crops each year—one of wheat, barley, or lentils, the other of rice, millet, and corn. Many kinds of fruit, such as the apple, peach, pear, apricot, plum, cherry, pomegranate, fig, and grape, are cultivated for food, and are exported when dried. Another leading export is asafetida. The madder and castor-oil plants abound. Copper, lead, iron, gold, and precious stones, especially lapis lazuli, are found, but few mines are worked.

Trade and Cities. The chief industries are the raising of cattle, sheep, and horses, the cultivation of silk, and the manufacture of felts, carpets, rosaries, and camel and goat hair articles. Trade is restricted by heavy transit duties. Goods are transported by camels and horses. There are practically no navigable rivers and the roads are generally sandy and rough. Commerce with India is carried on through passes in the Suláiman Mountains. The most important of these is the historic Kháibar Pass which marks the chief caravan route from Central Afghanistan into the Punjab. The Gumal Pass is upon the route from Ghazni, and that from Kandahar into Sind is by the Bolan Pass, through which a railway from British India has been extended. Afghanistan has four chief cities. Kabul, the capital, 6,000 feet above sea-level, is the seat of an arsenal where guns and cartridges are made. The city has large engineering works, an electric lighting plant, and other modern improvements. Ghazni, southwest of the capital, is the headquarters for trade with India. Kandahar, still farther to the southwest, has a large transit trade and manufactures of various kinds, and Herat in Northwestern Afghanistan has manufactories of silk, woolen and leather goods, and carpets.

Government and People. The government of Afghanistan is a hereditary absolute monarchy of the oriental, despotic type. The country is divided into four provinces, each having a Governor, under whom nobles dispense justice after a feudal fashion, with more or less spoliation and corruption. There is also the tributary State of Badakshan, conquered by the Afghans in 1859. The revenue of the Ameer is unknown, but enormous, probably over $3,000,000 a year, consisting largely of payments in kind. From the Government of India, the only foreign country with which Afghanistan outwardly

maintains relations, the Ameer receives an annual subsidy of about $583,200. A British Agent, who must be a Mohammedan, resides at Kabul, and an Afghan Political Agent resides at Calcutta, India. The political conditions of Afghanistan have been for many years a source of anxiety to the rulers of British India because of the advance of Russian power in Central Asia, and the possibility that Afghanistan might become a basis of military operations by Russia against India. Constant care has been taken to preserve close relations with Kabul, and prevent Russian advance over the border into the Ameer's realm.

The natives of Afghanistan are by no means a homogeneous people, but are made up of many tribes. The Durranis are the dominant race; the most numerous are the Ghilzais, a ferocious Turki tribe.

REED BOATS ON LAKE HELMAND

In the great desert region lying in the southwestern part of Afghanistan are several lakes of considerable size. Here may be seen the peculiar Afghan canoes made out of light reeds fastened strongly on a frame and covered with a preparation that keeps out the water. They are used by fishermen.

THE HILL OF MALIK SIAH

On the summit of this low peak the official boundary lines of Persia, Afghanistan, and British India meet. It lies in a wilderness but little known to geographers. East of it is the Helmand desert area and to the west of it the sparsely settled regions of Eastern Persia. Europeans enter this portion of Asia only when protected by an official military escort.

Other tribes include the Iranian Tajiks, the Tartar Aimaks and Hazaras, the Turks, Tartar Uzbegs, and the Kaffirs, a non-moslem people of the Hindu Kush Mountains, subdued in 1895. With few exceptions the inhabitants are Mohammedans of the Sunni sect. Speaking generally, the Afghan tribes are sturdy and brave, inured to hardships, and fanatically opposed to intrusion of European powers into their territory. With the Persians the Afghans form a connecting link between the Aryans of India and those of Europe, though having undoubted infusions of Semitic and Dravidian blood.

Historical. In the 11th and 13th centuries the Afghan empires of the Sultans of Ghazni and Ghor extended over the Punjab; and it was not until the 16th century that the last of the Afghan dynasties in India was overthrown by the Mongol invaders. Afghanistan became a separate country after the assassination of its Persian ruler, Nadir Shah, in 1747, when Ahmad Khan assumed the leadership. He welded the provinces into a single empire which included the Punjab and Kashmir on the east and extended to the Amu River on the north; but his empire, founded on suddenly acquired wealth and maintained by plundering expeditions abroad, crumbled to pieces under his descendants.

The English first interfered in Afghan affairs in 1838 in order to protect their interests by preserving a barrier against Russian and Persian advances in the direction of India. In 1841 a revolt broke out at Kabul, in which the Shah and the leading English officials were murdered. The British troops were obliged to flee hastily from the country; but of the 4,500 soldiers and 12,000 followers who started on the "Retreat from Kabul" in January, 1842, only one survivor reached the English lines. Although this disaster was soon retrieved by General Pollock, the country was abandoned to its native rulers. In 1878, under Shere Ali, war again broke out with the English, who captured Jalálábád and Kandahar. Yakub Khan was proclaimed Ameer and the foreign relations of Afghanistan were placed under British influence. In 1879, however, the British Resident at Kabul was massacred, and another British invasion occurred, whereupon Yakub Khan abdicated. Under the latter's brother, Ayub Khan, in 1880, the Afghans inflicted a defeat upon the British; but an English army under General Roberts relieved Kandahar.

A VEILED BEAUTY

Abdur Rahman Khan, grandson of Dost Mohammed, who had been for years an exile from Afghanistan, living on a Russian pension at Samarkand, was next recognized as Ameer. He shrewdly took advantage of the rivalries of Great Britain and Russia to strengthen his own position. In 1885 the seizure of Penjdeh by Russia almost precipitated war between the two powers, but in 1886–87 an Anglo-Russian commission peacefully demarcated the northern boundary of the Ameer's territory. In later years Abdur Rahman avoided any appearance of hostility to Great Britain. As a ruler he showed himself, from his accession, a statesman of great ability. Afghanistan, when he came to power, was a jarring aggregation of untamed tribes, accustomed to freedom from control and hostile to innovations of a foreign sort. Rivals for the throne were active in plots against him, and pressure was strong from European powers for recognition of influence. The Ameer proved equal to all emergencies. Not only was revolt forestalled or crushed but the government of viceroys was brought more closely under royal control than had usually been possible under the Ameer's predecessors. With equal genius the Ameer handled the problem of diplomatic relations with Russia and Great Britain. Aid and support were welcomed from both, but slight were the concessions made to either. In the demarcation of Afghan territory the Ameer maintained his sovereignty over all the region on which he had any valid claim. To Great Britain, from whom he received a heavy annual payment, he did not allow a foothold within his frontiers, nor was Russia permitted to occupy new points of vantage. Against railroads or telegraphs the shrewd ruler set his face. Their presence might be of service to an invading force. His death in October, 1901, was followed by the peaceable accession of his eldest son, Habibullah Khan. The present ruler has apparently tried to follow his father's policy by maintaining independence under peaceful conditions.

AFGHAN GENERAL

Ghulam Hyder was a trusted official of the late Ameer, Abdur Rahman. His uniform, made in European style, shows the adoption of Western military methods by the Afghans.

INDIA AND CEYLON

BRITISH INDIA

INDIA consists mainly of a great triangular peninsula almost wholly within the tropics, extending southward from Mid-Asia into the Indian Ocean and surmounted by a large continental region with considerable extensions east and west beyond the base of the peninsula. Its coast-line is washed by the Arabian Sea on the west and by the Bay of Bengal on the east. On the west and northwest India extends to the frontiers of Persia and Afghanistan; on the north the mighty mountains of the Himálaya system separate it from the Chinese province of East Turkistan and the lofty plateau of Tibet; on the east India impinges on the Chinese province of Yunnan and the ill-defined French Shan States of the upper Mekong River, and extends side by side with Siam halfway down the Malay Peninsula to the Isthmus of Kra. India thus lies between 8° and 37° N. lat. and 61° and 100° E. long. Its total area, about 1,700,000 square miles, is nearly equal to that of Europe exclusive of Russia.

VICEROY OF INDIA

The Hon. Gilbert John Elliot, Earl of Minto, was made Governor-General of India in 1905. He has had a distinguished career in the British military service, and from 1898 to 1904 held the position of Governor-General of Canada.

Mountains and Rivers. The configuration of India, excluding Burma, falls naturally into three divisions: The Himálaya region, the central river plains, and the highlands of The Deccan. The Himálaya region is the mountainous tract of the northern frontier. The Himálaya Mountains, which constitute the most elevated highland system on the globe, include two giant ranges extending from northwest to southeast, with lofty spurs and great valleys between them. The southern range culminates in the western part of the frontier, in the loftiest peaks yet measured on the earth — Mount Everest, 29,002 feet; Mount Godwin-Austen, 28,265 feet; Kánchanjangá, 28,156 feet; and Dhaulágiri, 26,825 feet. The other elevated region of India is The Deccan, a triangular plateau covering most of the southern part of the great peninsula, and having a mean elevation of from 2,000 to 3,000 feet above sea-level, with a gradual incline toward the east. The Western Gháts (Ghauts), forming the boundary of The Deccan plateau on the west, run parallel to the Malabar Coast. The Eastern Gháts, on the other side of The Deccan, do not form a continuous range, but a series of broken hills, with an average elevation of 1,500 feet.

Hindustan proper, the region of the river plains, lies south of the Himálaya Mountains. It comprises the alluvial plains watered by the Indus, Ganges, and lower Brahmaputra rivers and their tributaries, and contains, especially in the Indus basin, the greatest irrigation system in the world. The Indus River, 2,000 miles long, drains Kashmir and the Punjab in the northwest and empties into the Arabian Sea. One of its affluents, the Sutlej River, is 600 miles long. The Indus has a tremendous descent in the upper half of its course, but along its lower half it is navigable for vessels of light draft. In the wet season it is even more subject than other Indian rivers to sudden inundations, which lay waste the country for miles inland. The Ganges River, flowing east and southeast about 1,600 miles, drains almost the whole of the Bengal Plain and empties into the Bay of Bengal. Near its mouth it is joined by the Brahmaputra or Sangpo River, which flows down almost 1,500 miles from the extreme northeast.

The Jumna, which higher up drains the Rájputána country, is 850 miles long. The lower Ganges gives access for 100 miles to large vessels through its widest mouth, the Húgli. Beyond this point large boats ascend a distance of 1,000 miles or more on this river and its great tributaries. The local traffic on these rivers is large, and, indeed, the Ganges system would give the finest waterways of any country in the world, but for the constant shifting of its channels. The Ganges-Brahmaputra Delta is one of the largest in the world, stretching eighty miles along the coast and inland 200 miles. The alluvial discharge through its streams discolors the sea for some sixty miles.

GOVERNMENT HOUSE, CALCUTTA

The headquarters of British power in India are in an immense building located in the European quarter of Calcutta. The main entrance faces the north. At the eastern entrance to the terrace is a great archway.

THE GENERAL POST OFFICE, CALCUTTA

By nothing, perhaps, is the intrusion of European ways into the centuries-old civilization of India so marked as by the postal and telegraph systems that English rule has spread over the land. The Calcutta post office occupies a splendid modern building on the site of the old fort around which once raged the fight of English and natives for supremacy. The third and fourth pillars from the extreme right of the picture mark the location of the "black-hole," whose awful tragedy will never be forgotten.

From The Deccan plateau six rivers find their way through separate channels to the coasts. Of these, by far the largest are the Godávari, 900 miles long, and the Kistná, 800 miles, which flow in nearly parallel courses through Bombay, and enter the sea through two large deltas about sixty miles apart.

Climate, Flora, and Fauna. In the plains of India the heat is very great throughout the year; on the plateaus it is tempered by the elevation. A marked influence is exerted by the monsoon

winds, which from May or June to the end of September blow from the southwest and during the late fall and winter from the northeast. The southwest monsoon brings much moisture from the Indian Ocean, part of which, gathered by the Western Gháts Mountains, gives the southwestern coast an abundant water supply. The interior highlands also usually receive some rain; but the great burden of the monsoon is carried to the Himálaya slopes. The rainfall in Northwest India is limited. The northeast monsoon deposits some moisture upon the Eastern Gháts, which, with the irrigation afforded by the rivers, enables the eastern coast to support a dense population. In the winter months a slight rainfall occurs also in the Punjab and in the valleys of the upper Jumna and Ganges rivers. The central plains lying on the edge of the moisture-bearing air currents are known as the zones of uncertain rainfall. Frequently, through failure of the monsoons, they are subject to disastrous crop failure and famine, entailing upon the Government enormous expenditures for relief.

TOMB OF HATHI SING, AHMEDÁBÁD

A wealthy native of Ahmedábád about a half century ago erected near his magnificent residence a temple and tomb. The buildings stand just outside the gates of the city, and are beautiful examples of modern Indian architecture.

Though less than half of the peninsula is within the tropics, its flora and fauna, except on the loftiest habitable slopes of the Himálayas, are those of the torrid rather than of the temperate zone. On the northern plains are produced banian and tamarind trees, rice, wheat, and other grains; in the delta region the bamboo and different palms, besides indigo, cotton, jute, silk, sugar, tea, tobacco, and opium. The forests of The Deccan plateau and mountains produce teakwood, ebony, mahogany, sandalwood, and other valuable woods. Everywhere in lower India are the jungle animals — the elephant, tiger, leopard, and monkey. Poisonous snakes abound.

Natural Resources. Agriculture has been from the earliest times the chief industry of India, the enormous peasant population living very largely upon rice and fully five-sixths of the people being occupied in tilling the soil. The labor is still largely carried on by wholly primitive methods, although for thirty years or more systematic efforts have been made by the Government to distribute information on the subject and to introduce improved methods. The remarkable fertility of the soil and the great poverty of the masses of the people have together tended to confine effort largely to tillage as the easiest means of supplying natural wants. Agriculture is aided by an irrigation system, which is the greatest in the world. It comprises the Ganges Canal, 440 miles long, completed in 1854, with 2,634 miles of distributaries; the Sirhind Canal in the Punjab, 542 miles long, with 4,662 miles of distributaries, and similar works on other rivers.

The minerals of India are many and valuable, but as yet imperfectly worked. The most productive coal-fields lie in the basin of the Húgli River, but others of far greater extent, although slightly worked because difficult of access, are in the Dámodar and other valleys of Western Bengal. However, the most of the coal used is imported from England. Excellent iron ore is found in Western Bengal and the Madras Presidency. Gold, obtained chiefly by washing, is produced in the valleys of the Himálaya Mountains and the Northern Deccan border, and more plentifully in Mysore. Salt is obtained by evaporation from sea-water, from inland salt lakes, and by quarrying the solid hills of salt found in the northeastern part of the Punjab. Natural saltpeter is found in the upper Ganges Valley, where its manufacture is an important industry. Tin is confined to Burma, and copper and lead occur in the Himálaya Mountains. Burma is the chief source of the world's supply of rubies.

THE EDEN GARDENS, CALCUTTA

This public park is named from its donors, the Misses Eden, sisters of a former Governor-General. A pagoda brought from a captured Burmese city adds a picturesque touch to the park scenery. The nightly band concert at the gardens is one of the interesting social features of Calcutta.

SHIPS IN CALCUTTA HARBOR

The traveler who comes to Calcutta by sea is impressed, on his arrival, by the amount of shipping that is always present in the harbor, showing the commercial importance of the port. From all over the world the freighters gather to carry away the products of the Indian Empire, and around them is usually seen a vast fleet of small river boats and harbor craft whose owners ply a petty trade along the shores, or with the outlying ships. Calcutta is one of the great trading cities of the world.

Exports and Industries. The leading agricultural exports of India are wheat, jute, cotton, hides and skins, opium, indigo, tea, tobacco, and oil-seeds. Enormous crops of wheat are raised on the river plains, and India has now become the fifth country in the world in the production of this grain. In cotton, it ranks second, and this staple, raised especially throughout the Punjab, is the country's chief article of export. Jute thrives better along the Lower Ganges and Brahmaputra rivers than anywhere else in the world. Cattle raising is carried on chiefly in the Indus Valley, and indigo is raised very largely along The Deccan rivers. Teas from India and Ceylon, prepared for market by machinery instead of by hand processes as in China, have practically supplanted the Chinese product in the markets of England and its colonies. The manufacture of opium is a Government monopoly. The poppy is grown in parts of Bengal and the Northwest Provinces and Oudh. The cultivator is paid a fixed price for the plant juice at the Government agencies at Gházipur and Patná, where it is prepared and packed in chests, which are sold monthly by auction in Calcutta. The drug is produced also in the Native States of Central India and Rájputána, where it is subject to a heavy export duty.

The native manufactures of India, the beautiful textiles made on hand looms, art work in the precious metals, and carved woods, have been famous for centuries. But work by machinery is of comparatively recent date. The cotton factories in Bombay, Calcutta, and elsewhere now work up much of the home-grown product. So also the steam-power silk looms in Bombay work up the cocoons grown in the Punjab, Assam, and elsewhere. But the making of richly figured silks by hand looms is still carried on in many of the old cities, also the weaving of the highly valued Kashmir shawls in the district of that name. Carpets and rugs, and articles in ivory, gold, silver, and copper, all made by slow hand processes, are still articles of limited, though valuable, export.

BATHING SCENE IN THE SACRED GANGES AT BENARES

Thousands of pilgrims gather in November at the shrines of the Ganges to perform the ceremonious ritual of their faith, which attaches special importance to bathing in the sacred river and drinking of its waters. The river's edge is lined with great flights of stone steps. Above them rise the roofs of shrines erected in honor of the various deities. For three miles there is a constant succession of "ghats" or steps, with the buildings above. To this custom of massing immense crowds and bathing together in water that bears all sorts of organic pollution many ascribe the fearful epidemics that from time to time sweep off the Indian population by thousands. The religious character of the ceremony, however, prevents any effort to suppress it.

Chief Ports and Cities. The seaports of India are remarkably few for a country with such an extensive coast-line. Calcutta, the capital, thirty miles from the Húgli mouth of the Ganges, is the largest city in the British Empire except London and is the outlet for the products of Bengal, especially jute, indigo, and opium. It has jute and paper manufactories and is the emporium for a large tea trade, but, since the opening of the Suez Canal, has fallen behind Bombay in the extent of its shipping interests. During the hot season the seat of the Viceroy is removed to Simla in the Punjab, 7,000 feet above sea-level. Bombay, the chief center of commerce with Europe, America, and the Far East, having the best harbor in India as well as extensive shipyards, commands nearly one-half of the exterior trade of India, with wheat and cotton as its largest exports. Situated near the cotton-fields, it is the largest center of cotton manufactures. The harbor of Madras is exposed to dangerous storms, but nearly all the commerce of the southwest centers there. Madras has few manufactures, but as a literary and professional center it leads both Calcutta and Bombay.

Among the principal cities in the interior are the following: In the Northwest Provinces, Benares, the chief religious center of the Brahmans; Cawnpur, with cotton-mills and tanneries; and Allahábád, at the junction of the Ganges and Jumna rivers, a pilgrimage shrine for the natives of the northeast and west. In Oudh, Lucknow, on the Gúmti River, is in the center of the fertile region known as the "Garden of India." It was formerly the metropolis of a great Mohammedan kingdom, but since the departure of the native court the industries have declined, although manufactures, chiefly luxuries, such as gold and silver brocade, fine muslins, beautiful needlework embroideries, and excellent glasswork and molding, testing the skill and patience of the Oriental artist, are fostered. Since the incoming of the English the roads and the sanitary condition of the city have been greatly improved. In the Punjab, Delhi is a large wheat and produce market and manufactures large quantities of muslins and gold and silver filigree work. It is an important center of internal trade. Peshávar is a military post of great strategic value near the mouth of the Khaibar Pass, on the main route of traffic with Kabul and Western Turkistan. Lahore is the chief railway center. In the Central Provinces, Nágpur is developing as a center of the cotton industry and produce trade. Jabalpur commands the upper Narbadá Valley and is a wheat center. In the Madras Presidency, Tanjore is the center of the most densely peopled tract in Southern India, along the shores of the lower Cauvery. In Burma, Rangoon in the Iráwadi delta in Lower Burma, is the chief outlet for the produce of the province. It is the seat of a famous Buddhist temple and is rapidly growing in population. Mandalay, in Upper Burma, on the Iráwadi River 386 miles above Rangoon, attracts a large trade from the north and east.

The sea-borne foreign commerce of India has increased at an average annual rate of over 21 per cent for more than half a century. There is also a large and rapidly growing overland traffic with Siam, the Shan States, Western China, and Afghanistan. The principal exports are raw and manufactured cotton, rice, hides and skins, seeds, tea, opium, jute, wheat, indigo, wool and woolen goods, coffee,

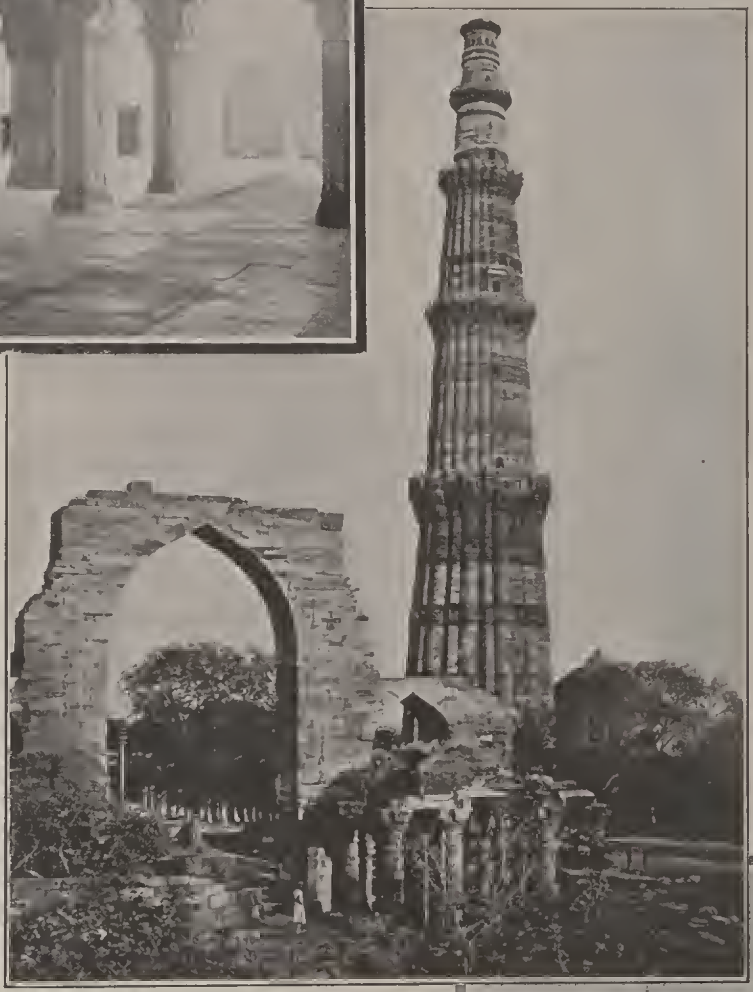
lac, teak, oils, and raw and manufactured silk. Imports include cotton goods and yarn, metals and metal goods, oils, sugar, textiles, provisions, liquors, clothing, and coal. The first railway in India was begun in 1854, and now all the principal towns are connected by trunk-lines.

People and Religion. The total population of India comprises about 300,000,000, or more than one-sixth of the human race. The natives of the country present examples of both the Aryan and the Turanian races, besides an intermingling of the two. They are a

HALL OF AUDIENCE, DELHI PALACE

A pavilion forming part of the palace of the Mogul Emperors was used by them for the reception of honored visitors. Its marble walls and columns are richly gilded. On one side is still seen the marble platform on which stood the famous peacock throne, now in Persia.

conglomeration of numerous ethnical groups and families. Of the aborigines, a short, swarthy, stalwart people of unknown origin, who were dispossessed by the fair-skinned Aryans, descendants are still found in the hills and in the northeast coastal region. Aryans of comparatively pure stock are found in the upper Ganges Valley, in Rájputána, and on the northwestern coast. Successive invasions by other races from Central Asia brought infusions of the Scythian, Arabian, Afghan, and Mongolian types. About 118 different tongues and dialects are spoken, Hindi being the language of more than 85,000,000 people and Bengali that of very nearly 41,000,000.



TOWER OF KUTAB, DELHI

This ancient minaret of a mosque, erected in 1199 by Kutab-uddin, the first Mohammedan king of Delhi, is 240 feet high. On its outer wall are successive balconies, each richly sculptured. The arch which stands near it was once a part of the mosque.

The prevalent religions of India are the Hindu, embracing 75 per cent of the total population, and the Mohammedan, which includes about 15 per cent. Buddhists number more than 7,000,000, chiefly in Burma. Christians are estimated at nearly 2,300,000, nearly two-thirds of whom are Roman Catholic and one-third Protestant. Other sects include the Sikhs, Jainas, Parsis or Fire-Worshipers, Jews, and Animists.

Government. The government of India, which passed from the East India Company to the British Crown in 1858, is administered in England by a Secretary of State for India, assisted by a Council of not less than ten nor more than fifteen members. In India, the supreme executive authority, subject to the control of the Secretary of State, is vested in the Governor-General, or Viceroy, who is appointed by the Crown, and is also aided by an Executive Council, but can overrule the opinions of a majority of its members. In framing laws, this council is increased by sixteen additional members, chosen by the Viceroy, half of whom must be non-official persons, and some are always educated natives. The different Presidencies and States are each under the control of a single executive officer, as a governor or commissioner. Within the provinces there is a division for purposes of local administration into districts, and each district is under the direct charge of a deputy commissioner.

Three-fifths of the area of India is now included in fourteen local governments and administrations, under the direct political control of the British Indian Government at Calcutta. The remaining two-fifths comprise Feudatory Native States or "Agencies" under native rulers. The independent monarchies of Nepál, Bhután, Balúchistán, and even Afghanistan, are held to be within the sphere of British influence. With very small exceptions, all of the great peninsula and its outlying islands are claimed as British India.

Aden and Islands. Aden, a volcanic peninsula on the Arabian Coast 100 miles east of the Strait of Bab-el-Mandeb, is a fortified coaling station on the highway from Europe to the East through the Suez Canal. It includes Perim, a small island coaling-port at the entrance to the Red Sea, both being subject to the Bombay Government. To these are attached the Kuria Muria Islands, on the Arabian Coast, ceded by the Sultan of Maskat as a cable station, and the island of Sokotra off the African Coast, acquired in 1876.

The Andaman Islands in the Bay of Bengal have been used as a penal station since 1789. The Nicobar Islands, just south of the Andamans, were acquired from Denmark in 1869. The Laccadive Islands, some distance from the Malabar Coast, form a part of the Madras Presidency.

Historical. The early history of India is enveloped in legend. From evidence of language it is believed that the Aryans, a branch of the Indo-European race, were the progenitors of the Hindu race. Coming from north of the Hindu Kush Range, this people overspread Persia and Northern India about 2,000 years before the Christian era. The oldest writings of the Aryans that still survive are the Vedas, supposed to date from about 1400 B. C. These writings embody the mythology and philosophy of the sacred polity that under the name of Brahmanism became the religion of the Hindu people, and through certain features, as the caste system, had a profound effect upon national character and development. Buddhism was founded in the 6th century B. C. by Sakya Muni, or Gautama, who was called Buddha, "the enlightened." The religion that he taught was essentially a social reform. For more than 1,000 years it existed in India, side by side

THE TAJ MAHAL, AGRA

Artists have called this mausoleum "a poem in marble." It was erected in the 17th century by the Emperor Shah Jehan over the remains of his queen, and the emperor was also buried here at his death. The building is faced with white marble and the ornamental detail of the interior is exquisitely beautiful in sculpture and inlaid work of precious stones.

with Brahmanism, but by the 12th century, through the persecutions of the older religion, Buddhism had become practically extinct in India, although it still flourishes in China, Japan, Siam, Nepál, Burma, and Ceylon.

Darius of Persia invaded India about 500 B. C., and took possession of the Punjab country, but the Persian dominance there was overthrown by Alexander the Great and his armies 327 B. C., and within a few centuries the influence of the Greek conquest was swept away by the Scythians. An Arab invasion occurred in the 7th century, but it was not until the beginning of the 11th century that the

Afghan King Mahmud laid the foundations of a strong Mohammedan empire in India, which lasted fully 500 years. During this period Mongol hordes raided the country again and again. Under Genghis Khan they had spread over Central and Western Asia, reaching the frontiers of India in 1219. Under Tamerlane in 1398 they invaded the country, sacked Delhi, and laid waste a great part of Hindustan. After an ensuing interval of anarchy and tyranny, Sultan Baber in 1526 overthrew the last of the Afghan Kings at Pánipat and founded the so-called Mogul Empire.

THE VICTORIA STATION, BOMBAY

The terminus of the Great Indian Peninsular Railway is one of the finest railroad depots of the world. It is built in the Italian Gothic style with oriental modifications in the style of the domes. The cost was $1,500,000. There is much sculpture in its ornamentation and the artistic effect is very impressive. This is the usual starting point for tourists. Indian railways are fostered by the government because of their importance in securing quick movement of troops.

That empire reached its zenith under Shah Jehan (1628–58), whose stormy reign was filled with warfare, and began to decline during the reign of his son, the able but cunning and cruel Aurung Zeb (1658–1707). As the power of the Moguls waned that of the Hindu Mahrattas increased. During the first half of the 18th century these extended their power over the whole of Central India. Then followed a most turbulent period, chief warring against chief, and peace was not secured until the dominance of English power was established in the country.

Growth of British Power. European nations began their rivalry for the rich trade of India in the 15th century. The Portuguese were the first in the field, followed by the French; then came the Dutch and the English. The first English East India Company was incorporated under Queen Elizabeth in 1600, the first English settlement placed at Surat in 1615, and the first presidency established, at Madras, in 1653.

During the war of the Austrian Succession, English supremacy in India was seriously threatened by the successes of the able French officer, Dupleix. The victory of Plassey in 1757 fully established British power in Bengal. Warren Hastings, first Governor-General of India in 1774, vastly extended the power of the East India Company and was the first great administrative organizer of the British possessions in India. Under the Marquis of Wellesley (1798–1805) the alliances with the Native States, which have proved such a source of British strength in India, were begun. The first Burmese war occurred in 1823–25. The first Afghan war, 1839–42, culminated in a disastrous flight from Kabul. Sind was taken and annexed in 1843. The first Sikh war, which began in 1845, resulted in the annexation of the Punjab in 1849, and later in that of Tanjore. In 1852 the second Burmese war resulted in further annexation. In 1853 the Central Provinces likewise became British territory on the death of the last of the Mahratta Princes of Nágpur. Oudh was added peaceably in 1856. As a result of the Sepoy Mutiny, the power of the East India Company passed directly to the British Crown, November 1, 1858, the Governor-General being thereafter a representative of the sovereign and styled also Viceroy. The terms of the viceroys have been marked by the gradual extension of local self-government, the subjection of turbulent frontier districts, the delimitation of boundaries, and great industrial and economical development. Queen Victoria's assumption of the title of Empress of India was proclaimed January 1, 1877. In 1884–88 the third Burmese war, the pretext of which was the cruelty of King Thebaw to his subjects and his discriminations against the British in trade, added Upper Burma and its dependent Shan States to the empire.

THE GOLDEN MOSQUE, LAHORE

The old residence city of the Mogul Emperors is now one of the busiest centers of British rule. Its past history is recalled by the stately buildings erected by native sovereigns. The Golden Mosque is fairly modern in age. It was built in 1753 by a favorite of the woman sovereign then in power. Later, it is said, the lady became angry with the mosque builder and had her maids of honor beat him to death with their shoes.

NATIVE STATES

Feudatory States or Agencies. The Native or Feudatory States of India (area about 679,000 square miles) number altogether about 650, of which only about 200 are of real importance. They are in general governed by native rulers, often with help and advice of Residents or Agents representing the British Indian Government. The chiefs may not make war or peace, nor send ambassadors abroad even to other States; they are liable to suspension or dethronement for misrule; their military forces are strictly limited; and Europeans may not reside at their courts without special sanction. Some pay tribute, while others do not. The laws of British India are not in force in any of the Native States. Haidarábád, east of Bombay, is nearly as large as Italy and has valuable coal deposits.

THE ROCK OF TRICHINOPOLI

Rising 236 feet above the plain on which the city stands is a mass of rock surmounted by a Shivite temple. From this height the eye commands a view of thirty miles in any direction. A covered sculptured passage leads to the top.

THE GREAT TEMPLE, MADURA

One of the famous centers of worship in India is notable because of its marvelous carvings which show Indian art in its most grotesquely elaborate phase. It is really a double temple, the western half devoted to the worship of Shiva and the eastern half to that of his consort, the goddess Minakshi. Passing through the sculptured gateways the traveler finds a wilderness of pillared halls of stone cut deeply with sculptured designs. Around the temple lie acres of grounds filled with minor chapels and pavilions.

Mysore, like Haidarábád, lies entirely on The Deccan plateau and is largely within the famine area. Gold mines are worked in the southeastern section and the forests produce sandalwood. Kashmir, in the extreme north, includes the valley of the upper Indus River and several outlying tribal districts on the Tibetan frontier. Weaving and silver-working are carried on at Srínagar, the capital, but the remainder of the country is mainly agricultural. Sikkim (area about 2,818 square miles) is a frontier State in the Himálaya Mountains east of Nepál, in 1889 recognized by China, its nominal suzerain, as under British protection.

Balúchistán. The territory known as Balúchistán (estimated area, 132,315 square miles) is the most westerly division of India, lying south of Afghanistan and extending to the Persian frontier. Its greatest length from east to west is about 550 miles; from north to south, about 450 miles. Quetta and the Bolan, held by the British Government on a perpetual lease from the Khan of Khelát since 1883, with Sibi, Pishin, and other districts definitely assigned to Britain, cover 45,804 square miles in extent. Border territory of 7,129 square miles belongs to Pathan and Baluch tribes. The entire country is mountainous and sparsely populated, intensely hot in summer and, in the mountains, cold in winter. Grazing is the chief industry. Sheep, camels, horses, cows, buffaloes, and goats are the live stock. Wheat, barley, millet, dates, and fruit are grown. Lead, copper, iron, coal, salt, and petroleum occur. The people are made up of a large number of wild tribes, and the religion is Mohammedan.

THE SACRED BULLS OF THE TEMPLE

The bull is an emblem of Shiva, one of the deities of the Hindu belief. Metal images of the animal are common in the temples of India and frequently the attendants of a temple maintain living animals to whom every care is given and who are regarded as in a sense sacred because adjuncts of the worship carried on in the temple. By the more ignorant Hindus these creatures are often regarded and treated almost as deities.

The chief State is Khelát (area 73,025 square miles), independent politically. It is a confederacy of tribes under a Khan. Khelát, the capital and home of the Khan, is on a mountain slope about 6,000 feet above the sea, and is surrounded by an earth wall eighteen feet high; it has a large caravan trade, and factories of weapons and firearms. Quetta, the center of British administration, is situated in the mountains about 150 miles north of Khelát, commanding the Bolan Pass. It is fortified and occupied by British troops, and is a place of much importance, having supplanted Herat as the strategic "Key to India." A railway from India, passing through Quetta, has been carried west to the edge of Afghanistan, but the Ameer will not allow it to enter his realm. Plans have been adopted by the Indian government for extending a branch westward through Nushki to enter Persian territory.

Nepál and Bhután. Independent but within the British sphere of influence is Nepál (area 54,000 square miles), lying south of Tibet and north of British India and extending 500 miles along the Southern Himálaya Range. It is a mountainous region interspersed with fertile valleys. Great forests produce pine, spruce, and oak. The chief minerals are copper, iron, sulphur, jasper, marble, and rock-crystal. The principal exports are rice and other grains, oil-seeds, ponies, cattle, hides, furs, jute, opium, ginger, musk, madder, borax, and yaks' tails. The people are Mongolians, the upper classes professing Hinduism, and the lower Buddhism.

Bhután (area about 16,800 square miles) is another outlying State on the southern slope of the Himálaya Mountains, east of Nepál, which it resembles in physical features and products. Its government is dual in form, there being a spiritual chief and a temporal ruler. Bhután stands in closer relations with Tibet than with India. The Indian Government since 1865 has paid to the ruler of Bhután an annual subsidy of 50,000 rupees, to guarantee the good behavior of his warlike subjects, who were formerly accustomed to raid and plunder the lowlands.

VIEW OF ADEN

Great Britain possesses, at the mouth of the Red Sea, a fortified post that guards the route to India. Aden owes its whole importance to its value as a military and naval stronghold. It is often called "the Gibraltar of the East." Because of its strategic importance to India it is administered as an Indian province under orders from Bombay. It is believed that the British fortifications which protect the harbor are impregnable, but they have never been tested in actual warfare.

Portuguese and French India. The Portuguese districts are three in number, comprised under the name of Goa. Goá proper (area 1,390 square miles) is a strip of land on the Malabar Coast sixty miles long and thirty miles wide. Its capital, Nova Goa or Panjim, a fortified city, is also the capital of all the Portuguese possessions east of the Cape of Good Hope. The amount of trade is considerable. Rice, the staple food, is cultivated. Hemp, cowries, betel-nuts, and teak are exported. Salt-making is an important industry. Damán, north of Bombay, and Diu, a town and fort on

NATIVES' FRUIT SHOP, CEYLON

The Sinhalese, native inhabitants of Ceylon, are a quiet, peaceable people, fond of ornamenting themselves with combs, bangles, and jewelry. Their language indicates an origin in some part of Northwestern India.

an island of the same name off the Gujarát Coast, are politically a part of Goa. Their combined area is 169 square miles. The woven goods of Damán are famous.

The French possessions in India are five in number, all administered by a single Governor, resident at Pondichéry: Pondichéry (area 115 square miles), on the Coromandel Coast; Chandarnagar (area four square miles), on the Húgli River, seventeen miles above Calcutta; Kárikál (area fifty-three square miles), in the Cauvery Delta; Yanáon (area five square miles), in the Godávari Delta; and Mahé (area twenty-six square miles), on the Malabar Coast. Rice, indigo, tobacco, betel-nut, flax, and cotton are cultivated in these small districts, and oil-seeds are the principal export. The weaving of blue cotton cloth is the chief industry of Pondichéry. The town has railroad connection with Madras.

Both the Portuguese and the French Colonial Indian possessions are a burden to their home governments, but are important politically because of their position.

CEYLON

The Crown Colony of Ceylon comprises the large island off the southeastern coast of India and the group of the Maldive (Mahaldib) Islands lying about 500 miles westward. It is separated from India on the northwest by the Gulf of Manar, but at its northern end is nearly connected with the mainland by the Manar and Rámeswarám islands and the coral reef known as Adam's Bridge, twenty-three miles long, between which there is no channel deep enough for large vessels to pass and over which a railway has been projected. From east to west its extreme width is 140 miles, from north to south its length is 266 miles, and its area is 25,333 square miles. More than one-half of the inhabitants are Buddhists and about one-fifth are Hindus. There are over 200,000 Mohammedans, and Christians number more than 300,000. Education is making rapid progress, being aided by Government appropriations.

Physiography. Physically Ceylon may be described as a core of mountains surrounded by a plain. The mountains are confined to the southern half of the island and in that section have only a narrow strip of plain between them and the sea. The highest peak is Pidrutalagala (8,295 feet), but Adam's Peak (7,420 feet) is the best known. The principal stream, the Mahavilla Ganga, flows northeast for 150 miles into Trinkomali Bay and is navigable for small boats to near Kandy. The climate, although warm, is remarkably uniform and in the hilly regions is healthful, the heat being moderated by the surrounding sea and by the monsoon winds. The mean annual temperature at Colombo is 80°, and there is a rainfall of eighty-eight inches, well distributed throughout the year. Vegetation in parts of Ceylon is of tropical luxuriance, including cocoanut, areca

ENTRANCE TO SHWE-DAGON PAGODA, RANGOON

This place of worship is the oldest and most famous of any in Indo-China. It is supposed to contain actual relics of the great Gautama Buddha, and to it come pilgrims from as far north as Korea and as far west as Ceylon. The edifice is reached by a series of terraces, and at the southern entrance are gigantic leogryphs guarding the covered way that leads upward to the open space around the place of worship.

STREET SCENE IN COLOMBO, CEYLON

The administrative capital of Ceylon shows to a large extent the effect of European occupation by its non-oriental buildings and public works. Some parts of the city, however, retain their Eastern character and prove very interesting to travelers. Passing through these avenues during the busy hours of the day the pedestrian meets a throng of curious native vehicles, drawn by clumsy oxen that are fastened to huge yokes of primitive design. Mingled with these are a multitude of street venders, and the usual increment of idle loiterers. Outside of the streets devoted to shops and markets Colombo is a mass of homes embowered in luxuriant tropical foliage. The city possesses considerable commerce, which tends to make it a busy place.

and palmyra palms, orchids, and rice. In the higher elevations are European plantations of tea, coffee, and cinchona. The fauna includes the elephant, which is exported to Southern India, the bear, panther, the Indian humped ox, and many varieties of monkey. The peacock, parrot, and other birds of bright plumage abound. Among reptiles are crocodiles, besides numerous snakes.

History and Industries. The first European settlements in Ceylon were made on the coast by traders from Portugal, who landed in 1505. The Portuguese were dispossessed by the Dutch in 1640, who in turn yielded to the British in 1796. Ceylon became a Crown colony in 1801. In 1815, at the request of the natives, the King of Kandy, last of the Sinhalese rulers, was deposed and his dominions were annexed formally to the British Crown. The government of Ceylon is administered by a Governor, aided by a Council, in which the native races are represented. The harbors of Colombo, the capital, on the southwestern coast, and Trinkomali, a naval station on the northeastern coast, the headquarters of the fleet in East Indian waters, are strongly fortified, mainly at the expense of the British Government.

ELEPHANT PILING LUMBER

Agriculture is the chief industry of the island people. Coffee was formerly the staple export product, but owing to disease of the trees it has been largely supplanted by tea, which is shipped chiefly to Great Britain, the British colonies, and the United States. Ceylon now ranks third among the tea-producing countries of the world. Cocoa products and different spices are also important articles of export. The chief mineral product of the island is an almost pure graphite, and Ceylon has long been noted for its precious stones, especially rubies, sapphires, and cat's-eyes. The pearl-fishery is also a valuable source of revenue. Colombo, the capital, on the southwestern coast, concentrates most of the external commerce, being the most central port of the Indian Ocean and safe and easy of access at all times.

The Maldive Islands are a coral group of seventeen atolls lying about 500 miles west of Ceylon and a few degrees north of the equator. They are ruled by a hereditary sultan, who resides in the island of Mali and pays annual tribute to the Ceylon Government. The islands are unhealthful. The main exports are cocoanut products, shells, and dried fish.

INDO-CHINA

INDO-CHINA, as a geographical term, corresponds nearly to the formerly used term of Farther India. It is applied, however, to that portion of Farther India which lies eastward from the British Indian frontier, thus excluding Burma and the lower extent of the Malay Peninsula. As its name implies, it is the region where the civilizations of India and of China meet and coalesce.

KING OF SIAM

Chulalongkorn, who has reigned since 1868, has devoted himself earnestly to aiding the spread of enlightenment and to encouraging progress. Although a despot, he has been kind and beneficent.

SIAM

The independent Kingdom of Siam lies between the British Indian Province of Burma on the west and French Indo-China on the east, with the Gulf of Siam washing its southern shores. On the north it reaches to the ill-defined Laos or Shan States and it includes also part of the Malay Peninsula, stretching southward to the British protected Malay States. With present boundaries, the total area of Siam is about 220,000 square miles.

Like Japan, this country has taken kindly to European civilization, and under royal leadership has welcomed new ideas. Unlike Japan, however, the Siamese, living in a tropical country, are indolent and forceless. They seem destined to lose even their autonomy in the face of British and French aggression. In personal character they are spoken of in the highest terms by those who have lived among them. The prevailing religion is Buddhism, with traces of the old Indo-Chinese nature-worship and Brahmanism. Education is chiefly in the hands of the priests, but lately has been placed under a head department in Bangkok where, in some of the Government schools, English and American teachers are employed to introduce Western methods.

TEMPLE AT BANGKOK

The "wats" or temples of Siam, with their graceful gabled roofs and low, rounded spires, are not imposing, but they are very picturesque and interesting features of the city streets. Often their doors are inlaid with ivory and mother-of-pearl and the roofs made dazzling with glazed or gilded tiles that reflect the sunlight.

Surface and Climate. Siam proper consists mainly of the basin of the Menam and its branches. This stream, flowing from the mountains of the north, which rise 6,000 or 7,000 feet above sea-level, traverses the great fertile plain of Siam and, with three important tributaries from the west, forms the chief thoroughfare of the country. The greater part not only of the Menam basin, but also that of the Mekong on the border, is said to be "mostly flat, diversified by isolated hills and broken jagged ridges of limestone mountains."

In the upland valleys of the north the rainy season is succeeded by the cool and dry northeast monsoon with a temperature of 30° to 40° F. at night, followed by the heat haze with the thermometer from 90° to 105° by day. The climate of the great plain is tempered by the gulf breezes. The rainfall is from sixty to eighty inches and the temperature seldom reaches 100° in the hot season. In the lowlands, however, the climate is very trying, owing to the humidity.

Government. The government is nominally a hereditary monarchy, but the King appoints his successor. Some of the public departments are in charge of European officials. Several of the tributary Laos and Malay States are administered by their own Princes, under the supervision of royal commissioners sent from Bangkok. The revenue is raised chiefly from taxes on opium, spirits, gambling, and land.

An Anglo-French agreement in 1896 guaranteed to Siam the integrity of the main central portion of the country, including the basin of the Menam (Me-Ping), with the coast from Bang-Tapan to Pa-se. By a treaty of 1893 the Mekong River was constituted the eastern boundary of the Siamese possessions, France acquiring the right to erect stations in a fifteen-mile strip along the western bank. This arrangement was modified in 1904 by a new treaty which gave to France large areas on the west side of the Mekong.

Resources. Industrial development is held in check by the popular serfdom fostered by the local Governors, the natives being liable to forced labor for one to three months each year. Rice is the chief product, the national food, and the principal export. The cutting of teak in the forests of the western and northern uplands is an important industry. Other products are sandalwood, rosewood, fruits, hemp, tobacco, cotton, coffee, pepper, cattle, hides, salt, and fish. Gold is found in many parts, but only the Kabin mine has been profitably worked. Copper, tin, coal, iron, zinc, manganese, and antimony exist. Diamonds have been found, and rubies and sapphires are mined at Chentabun, a port on the eastern gulf coast.

SCENE ON CANAL IN BANGKOK

Bangkok has been frequently called the Venice of the East, because of its many canals. Lined with towering trees, through which are seen glimpses of quaint old palaces and temples embowered in tropical foliage, the canals of Bangkok have a beauty quite unlike that of Venice. As in the latter city, however, they are the ordinary highways for travel between the homes of the people and the business portions of the town.

FRENCH INDO-CHINA

The French dependencies in the Indo-Chinese Peninsula since 1888 have been known as the General Government of French Indo-China. They include the direct possessions of Cochin-China (area 22,000 square miles) and Tongking (area 46,400 square miles), and the protectorates of the kingdoms of Annam (area 52,100 square miles) and Cambodia (area 37,400 square miles), together with the Laos country (area 98,000 square miles), added in 1893. In 1900 the port of Kwang-chou-wan in the Province of Kwang-tung, leased from China in April, 1898, was placed under the authority of the Governor-General of Indo-China. The total area of these dependencies, about 256,000 square miles, is greater than that of France.

The administration is in the hands of a Governor-General, assisted by a Lieutenant-Governor for Cochin-China and a Resident for each of the other dependencies, while a Superior Council, of which the Governor-General is a member, decides upon the budgets for Cochin-China and Laos and advises regarding the others. Hanoi, in Tongking, is the capital.

Physical Features. Cochin-China and Cambodia consist mainly of the alluvial lands of the Mekong Delta, which are covered with rice-fields and favored with an unfailing water-supply and a uniformly warm climate. The interior of Tongking is a highland region of from 2,000 to 4,000 feet elevation, and almost all of the people live in the Songkoi or Red River Delta, which is 5,800 square miles in extent and largely devoted to rice cultivation. Annam, between Tongking and Cochin-China, is a long, mountainous tract with a narrow littoral on the eastern side, and, on the western, a wild, sparsely populated hill tract, the Laos country. The principal rivers are the Mekong, nearly 2,500 miles long, which is navigable through most of its extent, though beset with obstructions and rapids, the Songkoi, and its principal affluent, the He-ho, both navigable.

In the north the summers are hot and the winters cold enough for white frosts. In the south, where more tropical conditions prevail, there is a dry season from October to April, while the remainder of the year is filled with rains and tornadoes. In its flora and fauna the region is distinctly tropical. Through the dense lowland jungles prowl the tiger, panther, rhinoceros, elephant, and bear, while the leopard, wild boar, and deer abound in the mountain districts. Reptiles are varied and numerous. Among birds the woodcock, wild duck, and peacock are notable. Among fish the most typical are the pa-beuk and pa-leun, reaching six feet in length, which inhabit the Mekong, and on each capture of which the fishermen pay a tax into the State treasury. Among plants the tea shrub is indigenous, as is also the cotton plant. Valuable hardwood timber is found in the upland forests, especially teak, which has a recognized commercial value.

A SIAMESE MOTHER

Among the many pleasant traits of this kindly people is that of devotion to the little ones, whose mothers, clothed in the "panung," the national garment of Siam, spend much of their time outdoors, watching over the play of the babies. Before the child is old enough to walk he is tied to floats and dropped into a canal, where his frantic kicks soon develop into real swimming.

RIVER AT MYTHO, COCHIN-CHINA

The center of a flourishing trade, being located on one of the branch streams of the Mekong Delta, and being also the terminus of an important railroad, Mytho resembles in many ways the busy towns of South China. River boats crowd its wharves and it is accessible to vessels of sixteen-foot draft.

People. The predominant race of this region are the Annamites, who resemble the Chinese in religious belief and in written language. The Cambodians or Khmers, taller and stronger but less energetic than the Annamites, are of another stock, showing in their religion and in caste distinction the influence of India. Their former greatness is attested by the marvelous ruins of the ancient capital of Angkor Tom, covering an area of twenty square miles, near the great lake of Tale Sap. The people of the Laos country are of still another race, the same as the Siamese and Burmese. There are also several primitive tribes in the hilly regions of Tongking and Annam. Under the French rule the native monarchs of Annam and of Cambodia continue to be the nominal sovereigns of their respective kingdoms, but administration is actually directed by French officials whose authority is supported by French garrisons. The religion of Annam is "a vague and very tolerant Buddhism" which has large elements of ancestor worship. In Cambodia the local faiths approach to those of India. Catholic mission work has been extensive in the countries.

Resources and Trade. Rice, cotton, sugar, seeds, tobacco, spices, and fish are the principal products of the alluvial districts. Cotton, coffee, cacao, and the opium plant are cultivated more extensively each year, and the mulberry is grown largely for the silkworm, which is indigenous to Indo-China. Engaged in the fisheries along the Annam coast are fully 30,000 people. The elevated regions have vast forests of teak and other valuable trees. Coal is the chief mineral production, but extensive deposits of gold, silver, tin, copper, and lead occur. By far the largest export is rice, which is shipped in great quantity from Saigon, chiefly to Hong-kong and Singapore for distribution to the Philippines, China, and Europe. Other important exports are cotton, fish, salt, spices, copra, and animal products. The principal imports are cotton yarn, textiles, metal goods, kerosene, salt, and wines.

The principal harbors of French Indo-China are Haifong (Haiphong) in Tongking, Turan (Touron), and Tuan-an (Thuan-an), port of Hue, the capital of Annam, and Saigon, capital of Cochin-China, the most prosperous dependency. Cambodia has practically no sea front, its one port, Kampot, being inaccessible for large sea-going vessels. Its external trade is carried on mainly through the port of Saigon. The capital is Pnompenh. An elaborate system of railroads has been planned by the French and is under construction. When complete it will join all the important districts with the seaport towns and will penetrate the Chinese Province of Yunnan, the development of which has been taken in hand by French capital. French enterprise has also established a banking system for the Indo-Chinese dependencies, with grants of commercial privileges enabling the banking officials to finance promising development projects. All of the Indo-Chinese dependencies are united into a general customs union.

PALACE, CAMBODIA

At Pnompenh is the residence of the vassal king of Cambodia, whose power is of limited extent under French rule. The palace resembles the temples in its architecture, more Chinese than Indian.

CHINESE EMPIRE

THE CHINESE EMPIRE, comprising nearly one-fourth of Asia and one-twelfth of the land area of the globe, consists of China proper, or the Middle Kingdom, and the dependencies of Mongolia, Manchuria, Tibet, and East Turkistan. Its estimated area is 4,277,170 square miles, practically equal to the combined areas of the United States (including Alaska and Hawaii) and Mexico. China proper, divided into eighteen provinces, has an area of 1,532,420 square miles. The dependencies cover 2,744,750 square miles, distributed as follows: Manchuria, 363,610 square miles; Mongolia, 1,367,600 square miles; Tibet, 463,200 square miles; and East Turkistan, 550,340 square miles.

KUANG-SÜ, EMPEROR OF CHINA

The ruler of China, born 1872, under the etiquette of the court lives a most retired life, and is believed to have been deprived by the Dowager Empress of all real share in government. He is said to favor reforms.

Mountain Ranges. The Chinese Empire, as a whole, is distinctly a highland region, almost everywhere covered with mountain ranges, except along the course of the great streams and on the east coast. On the north, Chinese territory is separated from that of Russia by lofty highlands. The spurs from the dividing range, known as the Khangai, Altai, and Tian Shan mountains, extend far into Mongolia till they run out in the desert plateau of the Gobi. Farther south the Tibetan range extends under different names for hundreds of miles along the northern edge of the Tibetan plateau to the confines of China proper. In the west this range rises to heights of over 20,000 feet, which are crossed by some very difficult passes. By these mountains the moisture carried by the southwest winds is intercepted.

PAI-LOW AT THE MING TOMBS, NEAR PEKING

In a valley opening out of the Peking plain are the thirteen imperial tombs of the Ming dynasty, which was overthrown in 1644 by the Manchu conquerors. Here is erected a gigantic memorial arch, the largest in China, which stands on the edge of a terrace of the high plain and marks the official entrance to the valley. Its outline, standing out against the sky, is visible from many miles away.

Between the Kuenlun range and the great range of the Himálayas on the south, the whole of the Tibetan table-land is cut up into peaks and mighty ridges. To this great system belong all the mountains of Southeastern China, which may be divided into two parts, north and south of the Yangtse. North of this river, two sharply defined ranges—the Peling and the Tapa-ling (Kioo-long-shan)—extend eastward under different names, until they run out in the coast plains. South of the Yangtse there lies, in the west, the Yünnan plateau, an elevated region with a greatly diversified surface. East of this, extending to the Pacific, the entire area is broken up with chains of mountains, many with heights that rise above the snow-line. North of the Hwang-ho (Hoang-ho) basin the country has a rolling surface, but no distinctly marked mountains until we come to the volcanic range of the Great Khingan running due north to the Amur River. East of the Khingan range the country of the Manchurian peninsula is mountainous throughout.

River Systems. On the north the great Amur River drains a large extent of Mongolia, and through its tributaries, all of Manchuria. This river is 2,700 miles long, and is navigable for fully eight-tenths of its entire length. Of the five great Chinese rivers whose channels reach the ocean, two only have the proportions of great continental streams—the Hwang-ho, or Yellow, and the Yangtse. These two rivers, both of which rise in the lofty plateau of the Kuenlun Mountains, drain an estimated area of 1,360,000 square miles. The Hwang-ho, the northernmost, about 2,600 miles long, is remarkable not only for its circuitous course, but also for its tendency to break over its banks and shift its channel at repeated intervals of time. Such ruin has been caused by these periodical inundations of the river that it is known as "China's Sorrow."

For so long a river, the Hwang-ho has few and small tributaries. The Yangtse has far more. The sources of these two rivers are near together in the great central highlands; they flow in like direction to the sea, and their mouths are not more than 300 miles apart on a straight line. In their middle course, however, both having many turns, they are widely deflected. The entire course of the Yangtse is about 3,200 miles. Of its affluents, the largest is the Han-kiang, usually referred to as the Han River, which flows from the north and enters the main stream at the city of Hankow. The Hwang-ho is of little value as a waterway, but the Yangtse, with its branches, affords thousands of miles of communication between the coast and the interior districts. Of the other important rivers flowing into the ocean the Liau-ho, flowing from the Khingan Mountains, empties into Liautung Gulf; the Pei-ho, near which is the city of Peking, flows into the Gulf of Pechili, at the harbor of Tientsin, while the Si-kiang, in the south, empties into the South China Sea near the island of Hong-kong. On the Si-kiang light-draft vessels can ascend 140 miles before meeting rapids.

HALL OF THE CLASSICS, PEKING

Close by the Confucian Temple and resembling it in style is the Pi-yung-kung, or Hall of the Stone Classics, approached by marble bridges spanning a marble-walled moat. In its long open verandas are ranged 200 tablets of stone bearing the engraved text of the nine sacred books of the Confucian belief. To these tablets Chinese scholars reverently resort for study.

Flora and Fauna. The climate of China increases in cold westward according to altitude and northward according to latitude. Much of the vegetation is like that of the United States. The summer in China is warm, with abundant rainfall due to the moist monsoon winds from the sea, making it possible to cultivate rice and other products of hot countries in parts of Northern China.

Thoroughly distinctive vegetable products of China are the wax-tree, the tallow tree, the paper mulberry, the camphor and varnish trees, cassia and other spices. The orange and the grape-fruit are thought to have originated in China, and to have been taken from there to Europe. Many varieties are still cultivated in the empire as are also native species of the peach. The bamboo is known as the Chinese national plant, because so widely grown and put to so many uses. Large trees are scarce in China proper, but more abundant on the mountains of the provinces. Wild animals, as the rhinoceros, tapir, tiger, leopard, bear, and wolf, now exterminated in the eastern part of the empire, are numerous in Tibet and Turkistan. The yak, a species of ox, is indigenous to Central Asia.

Population and Culture. The estimated population is 426,000,000, or more than five times that of the United States, almost equal to that of Europe, about one-half that of Asia, and nearly one-fourth the entire population of the earth. Of these, 407,000,000 are in China proper. Most of the people are very poor, and eke out but a meager subsistence, whether engaged in tilling the soil or otherwise.

GIRL OF NORTH CHINA

The indoor costume of the girls and young women of the better class in China is simple in form but often of rich material. Its resemblance to the Japanese kimona is due to the fact that the Japanese costume was borrowed originally from China.

China is one of the oldest of historical empires, and peopled by one of the most intelligent races, but it has been one of the least progressive. Although from a very early date the Chinese were great inventors, having discovered the use of the mariner's compass, the secret of making gunpowder, the art of paper-making, and of printing, long before these things were discovered by Western nations, they have in modern times remained absolutely impervious to the influence of mechanical invention and scientific discovery, as achieved by other countries. The cause of this seems to lie in the inherent conservatism of the Chinese character.

Education is held in high repute in China, being the passport to political advancement, yet vast numbers of Chinese adults can neither read nor write. Knowledge of Chinese literature is confined to a special literary class, who devote their lives to its study. Appointments and promotions in the public service are open in general only to those who have passed the examinations, chiefly in literature and ethics, that are periodically held for the purpose.

Three great religions prevail—Confucianism, Taoism, and Buddhism—and many of the people profess all three. There is no State hierarchy nor is any priesthood attached to the Confucian or State religion, which has no ritual, its duties consisting in the worship of ancestors and the study and observance of the moral precepts laid down by the ancients. Most of the Chinese are Buddhists, but there are about 3,000,000 Mohammedans, chiefly in the northwest and southwest. The latter faith was introduced along the caravan routes from Central Asia.

Resources. The Chinese are essentially agriculturists, and although their methods are primitive, work with skill and success. Enormous tracts of loess, often 500 feet and more in depth, exist in Central China, to which the land there owes its great fertility. Loess is of alluvial origin, and seems to have been the deposit of countless ages of herbaceous growth. In the valleys of the large rivers the land is very fertile, and in other districts the soil is artificially made productive by the use of fertilizing material and irrigation. Wheat, barley, maize, millet, and other cereals, with peas and beans, are raised in the north, while rice is chiefly grown in the south. It is estimated that one-eighth of the cultivated area of China is under rice, which forms the principal food of the nation, but the annual crop does not exceed the needs of the people, and there is no export. Tea is widely cultivated, but that exported is grown chiefly in the south and west. Sericulture is an old and important industry. The manufacture of silk originated with the Chinese, and China raises about two-fifths of the world's production of silkworms. Opium is rapidly becoming an important crop, and in the southern provinces sugar-cane, indigo, and cotton are cultivated. The propagation of fish is also a prominent industry.

The mineral resources of China are enormous. Coal-beds are found in all of the provinces. In Eastern Shansi there is a field of anthracite covering about 13,500 square miles, and in the western part of the same province bituminous coal covers about the same area. Both kinds of coal are found in Southeastern Hunan (Hoo-nan) throughout an area of 21,700 square miles, and in the northern and central parts of Süchwan (Szechuen) there are large deposits. Iron ores are abundant in Shansi; the copper ore of Yünnan has long been worked; lead, tin, and silver are found near the city of Mengtsu-hsien, and salt occurs in the southwestern parts of Shansi and Yünnan.

Industries and Trade. Manufacturing is extensive but confined chiefly to articles made by handicraft, in which the Chinese have great skill. They excel in the working of copper and bronze, in delicate work in gold and silver, and in the carving of ivory, wood, and horn. The bulk of Chinese trade was for centuries confined to the empire, and even now there are few exports except those of peculiar value, as silk and silk fabrics, which for long, as indicated above, held the first place. Almost equally as long, porcelain has been an important article of export. It was once made in China only, but now is made elsewhere. The principal textiles were formerly made by natives at their homes, and wholly by men, but in recent years European influence has led to the introduction of machinery. Silk factories and cotton mills have been established in various places.

CAMEL TRAIN ON THE MONGOLIAN FRONTIER

A large trade is carried on between China and Russia over the caravan routes that lead from North China through Mongolia and northward. Camel trains wend their way over the desolate and arid wastes, taking quantities of tea, silks, and other Chinese exports to the merchants who are in touch with the new Trans-Siberian Railroad. Along the frontier the caravans enter the great forest belt, and here, in the colder seasons, it is the habit to use sledges for transport.

The ports of Canton, Shanghai, Amoy, Fuchou, and Ningpo remained until 1860 the sole gateways for foreign citizens and foreign commerce into China, but the list of open ports now numbers about thirty-five, some of them in the far interior. The commercial treaty with Japan in 1896 practically threw open to the world the chief interior waterways of the empire for traffic, and the treaty ports for manufacture and importation of machinery. Finally, in 1898, small steamers under foreign control were given permission to penetrate beyond the treaty ports to the interior limits of navigation. The chief Chinese imports are opium, petroleum, breadstuffs, coal, and woolen goods. The exports are silk and silk goods, tea, sugar, straw braid, and porcelain.

Chief Cities. Shanghai, the New York of China, situated near the mouth of the Yangtse River, the "garden of China," has a larger foreign trade than all the other Chinese ports together. It is of growing importance as a cotton and silk manufacturing center. Tientsin, at the head of sea navigation on the Pei-ho River, is the seaport of Peking and the most important commercial city of Northern China. It is the northern terminus of the Grand Canal, which connects it with the Yangtse River and Shanghai, and is also connected by rail with Peking and Newchwang. Canton, situated near the mouth of the Si-kiang in the province of Kwangtung, is the great seaport of Southern China.

COAST FISHERMEN OF SOUTH CHINA

The narrow inlets and estuaries of Kwangtung province, South China, are favorite places for the fishermen to ply their art. Their little huts, raised high on poles to keep them well above the rise of the tide, are familiar objects along the sea-shore and upon the lower reaches of the tide-water streams. Here they live, dry their nets on spreading poles, and sort their catch.

Hankow, at the head of deep-water navigation on the Yangtse River, is the most important commercial center in the interior. It has the largest river traffic in China and is the greatest tea market. Newchwang, at the head of the Gulf of Pechili, is the treaty port through which commerce enters Manchuria, the most valuable part of the empire outside of China proper. Amoy and Fuchou, both in the province of Fokien (Foo-Kien), opposite Formosa, are important tea-shipping ports and have a large trade with the United States. Chifu (Chifoo), in the province of Shantung, has an important trade in United States cottons and oil.

Peking, the capital of the empire, has little commercial importance. It is in two grand sections, each surrounded by walls, the southern section called the Chinese City and the northern the Tartar City. Within the latter is a walled region known as the Imperial City, and within this still another walled inclosure, the Forbidden or Sacred City, in which is the Imperial Palace. The foreign legations are located in the Tartar City, south of the Forbidden City.

"DRAGON'S GLORY"

The Pagoda of the Dragon's Glory on the river bank near Shanghai is an ornate construction 120 feet high, on a spot occupied more than a thousand years by successive shrines. A spiral staircase leads upward to its six balustraded balconies.

Historical. According to tradition, the ancestors of the Chinese were wandering shepherds who moved eastward from some point in Central Asia and settled on the fertile plains of Eastern China. Prior to the reign of Yaou (2356 B. C.) the history of China is a mass of fables, and it is only from about the era of Confucius, in the 6th century B. C., that the dates become trustworthy. About 1122 B. C. the kingdom was divided into seventy-two feudal States. The effect of this was to weaken the central authority, and by new incursions of the Tartars, which began about 936 B. C., the country was devastated and the government impoverished. Che-Hwang-te, who ascended the throne 246 B. C., curbed the power of the feudal princes and became the first universal Emperor of China. To exclude the Tartars he built the Great Wall which is said to have consumed about ten years and to have cost the lives of half a million men.

About the beginning of the 13th century began the Mongol invasion, and by 1215 Genghis Khan had completed the conquest of Northern China by the capture of Peking. In 1259 Kublai Khan, his grandson, ascended the throne, but it was not until 1280 that he assumed jurisdiction over all China. During his reign Marco Polo, the Venetian traveler, visited the empire and brought back to Europe the first news of the great Asiatic State. By 1355 the last of Kublai's descendants had been driven out. The native Chinese emperors of the Ming dynasty ruled from 1368 to 1644 when the Manchu Tartars, who had been invited by the Chinese to assist in quelling a rebellion, took possession of the country and established the Tsing dynasty, of which the present emperor, Kuang-sü, is the ninth representative.

During the 18th century the commercial possibilities of the empire began to invite interference, and in the 19th occurred wars with Great Britain and France. A war with Japan brought about the Treaty of Shimonoseki in 1895, which provided for the payment of an indemnity of $80,000,000 by China, the cession of Formosa and the Pescadores islands to Japan, and the recognition of the independence of Korea. Then followed a series of concessions to various European powers in the shape of leaseholds and "spheres of influence," which, while not formally partitioning the territory of the empire, have nevertheless divided among foreign nations the chief control of its future destinies. In 1899 began the so-called "Boxers" movement against the presence of foreigners in China. Foreign residents were made the victims of mob violence, and in 1900 the foreign legations at Peking were besieged by the populace. They were rescued by an expeditionary force of allied troops hastily organized by the chief foreign powers, and a heavy indemnity was laid upon the Chinese government.

CHILDREN OF YACHOU

A typical group of the children of China who have come under the influence of the mission schools shows that they are no less attractive than children of other climes. Yachou is an interior town of considerable importance located in Süchwan province.

Government. The government of China is based upon the ancient patriarchal or family model, although the Emperor is not in practice the absolute head. The "Collected Regulations of the Tsing Dynasty" and the precepts of Confucius form the constitution of the empire. Supreme control is vested in the Grand Council, while actual administration is attended to by a Cabinet of four members. Under the Cabinet are eight boards of government, each presided over by a Manchu and a Chinese: (1) The Board of Civil Appointments, supervising the conduct and administration of civil affairs; (2) the Board of Revenues, regulating all financial affairs; (3) the Board of Rites and Ceremonies, enforcing laws and customs to be observed; (4) the Military Board; (5) the Board of Public Works; (6) the High Tribunal of

Criminal Jurisdiction; (7) the Admiralty Board at Tientsin, established in 1885; and (8) a Board of Foreign Affairs, having charge of the external relations of the empire, composed of five members with

PREPARING TEA FOR THE MARKET

In April the tea-leaves are picked and dried in the sun. Then each family of pickers sells the product to the tea-buyers. The buyer, having secured the amount wanted, mixes his material and fires it in ovens to thoroughly dry it. Women and children next examine it in small quantities at a time, removing stems and stalks that have remained with the leaves. This work gives support to many poor people.

defined powers, of which the president must be an Imperial Prince. Each province is ruled by a Governor assisted by a Council.

The total strength of the army on a peace footing is estimated at 300,000 men and on a war footing at about 1,000,000, but the men as a rule are imperfectly disciplined and armed. The revenue of the government, derived principally from the taxes on land and salt and from the customs at seaport towns, is large.

Dependencies. The dependencies of the Chinese government are in the nature of protectorates bound to the Peking government by very loose ties. The great number of nomadic tribes and farming communities outside of China proper that acknowledge its sway preserve their local independence, but maintain a few resident officials sent out by the Peking government and usually send some sort of tribute as token of fealty to the greater power. The great divisions of Tibet, Turkistan, Mongolia, and Manchuria are mere geographical terms and do not indicate political unities.

Tibet is a vast inland plateau region, the western part of which is arid and mountainous country, including many swamp areas and saline lakes, while the eastern is a forested and fertile region in which rise several of the great rivers of China and India. It has rich deposits of gold and iron, but is little known because of the hostility of the people to exploration. The Tibetans are akin to the Mongol races. Those in the arid regions are nomads with flocks and herds, while those of the river valleys are farmers. They follow the Lamaist religious system, which supports a hierarchy of ecclesiastics and many monastic communities. The chief ecclesiastic, a secular ruler as well as head priest, is resident at Lhasa, which is the chief city of Tibet. A Chinese official is also resident at Lhasa, and there are a few scattered Chinese garrisons quartered on the country. Eastern Tibet is under the supervision of the Chinese governors at Sining-fu and Chengtu-fu. The region exports to China musk, live sheep, wool, gold, skins, and drugs.

CANTON TRADING BOATS

At the coast cities of Southern China may be seen the peculiar boats of the Canton model. The sails are made of matting supported by ribs of bamboo, and the hulls, sometimes slightly modeled after European vessels, are still clumsy in their general effect. With these boats, however, an enormous trade is carried on between the seaports of the empire. They are used for coasting trips chiefly, being to small loo meet the ocean storms.

Eastern Turkistan, north of Tibet, is another elevated and mountainous region, much of it being stony desert alternating with fertile oasis. The chief towns are Urumtsi, the capital; Kashgar, Yarkand, and Khotan, the latter being centers of caravan trade between China and Central Asia. The region has been recently found to possess relics of an ancient civilization hitherto unknown to European scholars. The people have now considerable culture and are advanced industrially to the point of practicing manual trades with much skill. Silks, carpets, cotton goods, felt goods, and leather are exported. Irrigation is extensively practiced.

Mongolia, which lies south of Siberia, is similar in character to Turkistan, but has less advancement. In this region is the great desert area called the Gobi. On the northern edge of Mongolia are great areas of forest land. The people are largely nomadic and find their chief interest in stock-raising. Mongolia is the avenue of the caravan trade between Northern China

VILLAGE OF CHEN-TSA, NEAR CANTON

The fertile provinces of Southern China are dotted with villages whose pagodas overlook the plains for miles. It is believed that pagoda building grew out of the custom of erecting watch towers to guard against attacks by enemies during the troubled times centuries ago. Many of the older forms of pagodas are now found in the populous little towns of Southern China.

and Siberia. The chief town is Urga, the capital, where the Chinese governor resides and where caravan trade centers.

Manchuria, a fertile region at the extreme northeast of the Chinese Empire, is mountainous in the southern portion and in the more northern part. Along the middle course of the Sungari River, however, are vast, grassy plains of great fertility. The mountain region is forested and is believed to possess mineral wealth. The Manchurians are chiefly farmers and resemble the Chinese in their mode of life. Mukden, the chief town, is the seat of considerable trade.

Railroads. Because jealous of foreign interference the Chinese long opposed railroads. In 1876 a line from Shanghai to Wasung, eleven miles in length, was built in the face of popular opposition, but was destroyed some ten months later. In 1885 a railway from the coal mines of Kaiping was built. Since the close of the Japanese war there have been concessions to Europeans and Americans for the building of several thousand miles of railway and a great trunk line from Peking to Hankow is now under construction. This line, paralleling the coast, but at some distance inland, will restore the great trade that formerly passed north and south over the Grand Canal.

FOREIGN POSSESSIONS

Macao. By far the oldest European possession in China is the Portuguese district, comprising the city and island of Macao at the mouth of the Canton River and the adjacent fishing islands of Taipa and Colôane. Macao was leased to Portugal in 1586, subject to an annual payment, and was ceded in sovereignty in 1863, the Chinese retaining jurisdiction over their own people. Its area is four square miles; of its population more than eleven-twelfths are Chinese. Opium is the principal article of commerce, the trade, which is now declining, being chiefly in the hands of the Chinese merchants.

LITTLE ORPHAN ISLAND

Where the Yangtse River passes through a narrow gorge below Lake Poyang a rocky island rises 300 feet from the water. Legends say a girl, orphaned by a flood, was cast upon its banks and lived to acquire a reputation of great sanctity. From this comes its name. Temples and monastery now cling to the island's rocky sides.

Hong-kong. The mountainous island at the mouth of the Canton River was ceded to Great Britain in 1842. In 1860 the southern portion of the Kowloon Peninsula on the opposite mainland was acquired, and on June 9, 1898, to increase the defenses of Hong-kong, 200 square miles on the Kwangtung Peninsula and the island of Lantao were leased for ninety-nine years. Hong-kong has an area of 405 square miles. Of its population fully 95 per cent are native Chinamen. Victoria, the capital, situated on the northern shore, is a free port. The government is that of a Crown colony, administered by a Governor. Hong-kong is the chief distributing center for European products in the Far East. It is also a strongly fortified military and naval station, being headquarters of the British squadron in Chinese waters. Its exports are largely in transit, being a part of the trade of China, principally with Great Britain. The tonnage of this port is equaled by only two or three other seaports in the world. The chief exports are tea, hemp, and silk. Imports are mainly opium from India, cotton and woolen goods, iron and machinery, flour, and oil.

LAMAIST MONASTERY IN TIBET

Scattered over the Tibetan region are the great fortress-like buildings used by the communities of Lamaist monks. Very often there have grown up about the walls of the original monasteries clusters of villagers' houses, precisely as towns grew up about the abbeys of mediæval Europe. The monasteries themselves are similar to the old European communities. The buildings comprise a temple for worship, with cloisters connected. The monks are devoted to religious life and study.

Kiao-chou. The Bay of Kiao-chou, on the Shantung coast, was seized by Germany in November, 1897, and by treaty of March, 1898, China gave a ninety-nine year lease of the town, harbor, and district. At the time of the transfer the bay was losing its commercial value because of the deposit of silt from the streams. Under German control the harbor has been deepened and the construction of docks begun. The town of Kiao-chou is five miles from the harbor and will be superseded by a new town directly on the bay. From this point railroads are being built into the Chinese territory, especially to the Weihsien and Poshan coal mines, which are worked by German capital. The whole district handed over to German control is in area about 200 square miles. It is administered as a naval station, the chief official being called governor. Kiao-chou is a free port.

Kwangtung. Russia in March, 1897, obtained a twenty-five-year lease (to be extended subsequently by mutual consent) of Port Arthur and Talienwan, with 800 square miles of territory, thus acquiring a naval base commanding from the north the entrance to the Gulf of Pechili and securing an ice-free port on the Pacific Ocean open throughout the year. Additional concessions after the Boxer uprising of 1899 virtually confirmed Russian authority in Manchuria for an indefinite time. The leased district was erected into the Russian province of Kwangtung, with capital at Port Arthur, which was equipped and fortified as a naval and military base for Russian power on the Pacific coast. By the treaty following the Russo-Japanese war of 1904-5 all Russian rights were transferred to Japan and the district now forms a seaport and naval outpost of great commercial and political importance. Its possession safeguards the various Japanese interests in Korea and Northern China.

Kwang-chou-wan. France secured by a concession of April, 1898, about 230 square miles on the east side of the peninsula of Lienchou, including the town called Lienchou-fu, to be leased ninety-nine years. Later concessions gave the monopoly of the coal-fields in the adjacent territory and the privilege of building railroads for commercial use. The splendid roadstead, which is an estuary of the Ma-tshe River, and the wealth of coal deposits, make the place a valuable coaling station for the French naval force in Asiatic waters. In 1900 the district was put under the direction of the governor-general of Indo-China, but the Chinese local communal system is retained.

Weihaiwei. The walled town of Weihaiwei on the Shantung coast, with adjacent territory covering 285 square miles, was conceded by China to Great Britain in July 1898. It is a naval outpost created to hamper further Russian expansion in that direction, and is the northern depot of the China squadron. A commissioner located at Port Edward has control of European interests. Within the walled town the Chinese officials rule. Weihaiwei is well populated with Chinese farmers and fishermen, but has no special commercial value as yet, although gold deposits exist and traces of silver, lead, tin, and iron have been found. Under the agreement with the Chinese government the station is not to be made a fortified post by the British occupants.

THE BANK AT HONG-KONG

JAPAN

THE EMPIRE OF JAPAN consists of five large and many small islands lying off the eastern coast of Asia together with Korea and the leased Liautung peninsula. From its northernmost Kurile (Koorile) Island, near Kamchatka, southwestward to the southern extremity of Formosa, within the tropics, the length of the empire is over 4,000 miles. The name "Japan" is derived from Cipangu, a European corruption of Chi-pen-kue, the Chinese name for the country, of which the first knowledge was brought to Europe by Marco Polo in 1295. By the natives the empire is called *Nihon* or *Niphon*, "Land of the Rising Sun," oftener *Dai Niphon*, "Great Japan."

THE MIKADO OF JAPAN

Mutsuhito, the 123d Mikado of the present dynasty, came to the throne of Japan in 1867, succeeding his father, Komei Tenno. His reign has been marked by great reforms, to which he has lent his approval.

Island Area and Physiography. Of the islands, 487 have an area of more than six square miles each and about 500 are inhabited. The central and largest island, on which a majority of the Japanese live, is Honshiu or Hondo, "Main Island," to which the name Niphon is now given even in official publications. It is crescent-shaped, with an area of about 87,500 square miles and a population aggregating about 381 to the square mile.

THE ENTRANCE TO THE IMPERIAL PALACE, TOKYO

In the center of the city, on a wooded eminence surrounded by a double line of moats, stands the Imperial Palace. Historic interest centers around this commanding site, once crowned by the fortress of the warrior Ota Dōkwan and later occupied by the castle of the great Shogun Ieyasu. The entrance to the palace, modeled entirely after the Japanese style of architecture, and set within a broad, wooded enclosure just beyond the walls of the inner moat, presents a pleasing appearance.

The four other large islands are Yezo (Ezo) or Hokkaido (area 36,299 square miles), Kiushiu (Kyushu, area 16,840 square miles), Shikoku (area 7,031 square miles), and Formosa (area, including the Pescadores, 13,458 square miles). That part of the island of Sakhalin lying south of the parallel of 50° was added to the Empire by the recent war with Russia.

The islands of Japan, being chiefly of volcanic origin, are liable to frequent disastrous earthquakes. On October 28, 1891, one occurred by which nearly 10,000 persons were killed, 20,000 injured, and 130,000 houses destroyed in the central part of the main island around Gifu. In 1896 a tidal wave destroyed about 7,500 houses and caused 27,000 deaths, besides injuring 25,000 people. The country is very mountainous, parallel ranges extending through the larger islands, with many spurs, some of them reaching to the coasts. Not more than one-sixth of the area of the empire is available for agriculture. Most of the mountains are luxuriantly wooded and the numberless intervening valleys are fertile, and highly cultivated, the Japanese being, perhaps, the best gardeners in the world. Of the mountain summits, eighteen are active volcanoes. The most famous peak, Fujino-yama or Fujisan, sixty miles from Tokyo, has been dormant since 1707. There are many short and rapid streams, the most notable being the Tone-gawa, Shinano-gawa, Kiso-gawa, and Kitakami-gawa. None is navigable for any but the shallowest craft, save in the late summer when swollen by rains. Lake Biwa, in the Province of Omi, is a beautiful sheet of fresh water thirty-six miles long and twelve miles wide, with a depth of 300 feet. In the central part of Niphon is Suwa, a lake of considerable size.

Climate, Flora, and Fauna. The climate of Japan ranges from arctic cold to tropic heat, but is more equable than that of the Continent. It is influenced by proximity to the mainland and to the warm equatorial current known as the Kuro-shiwo, which, similar to the Gulf Stream in the Atlantic Ocean, flows northward off the eastern coast of Japan. A branch enters the Sea of Japan through Korea Strait, tempering the climate of the entire western coast. Snow falls everywhere on the large islands north of Formosa, but, except on the western coast, where its depth is phenomenal, and on the mountains, it does not remain for any great length of time. The driest months are November, December, and January. Wet weather continues from early April to August, and there are heavy rains in the latter part of September at the end of the hot season, which usually lasts from mid-July. In winter high winds prevail on the western side of the islands, and the typhoons or revolving storms of the summer monsoon sometimes do great damage on the eastern coast.

LAKE HAKONE

Lake Hakone, celebrated for the charm of its scenery, lies in a volcanic range of mountains rich in mineral waters, usually sulphurous and warm. The district, famous as a health and pleasure resort, and much frequented by residents of Tokyo and Yokohama, is not inaptly termed the Japanese Davos Platz. On the border of Lake Hakone stands an imperial summer palace reached by a delightful road that winds along the shore of the lake under an archway of giant pines, cedars, and cypresses. The district affords a magnificent view of the beautiful Fujino-yama and is especially famous for the reflection of the mountain in the lake by moonlight.

The flora of Japan is most luxuriant. About 25 per cent of the total area of the empire is under forests which belong to the State. Maple, chestnut, oak, elm, and beech occur. The bamboo and sago-palm flourish. The lacquer-tree furnishes the celebrated Japanese lacquer, a very hard varnish applied to wood or metal and having the most perfect polish known. The camphor-tree in Southern Japan and Formosa, the mulberry in Niphon, and the wax-tree are also the basis of important industries. The *Cryptomeria Japonica*, a kind of cedar, the hinoki cypress, and the kiyaki furnish timber. Fruits abound, but, except persimmons and oranges, are generally inferior. The tea-plant flourishes in some localities. Rice, barley, and millet are the staple cereals.

Wild animals are not numerous. They include bears in the north; boars, deer, and monkeys in the mountains; the squirrel, fox, badger, and hare. Snakes abound, but are, in general, harmless. Song-birds include the lark and a species of nightingale.

THE KINTAI BRIDGE, IWAKUNI

The Kintai-kyo, "bridge of the damask girdle," spanning the Nishiki-gawa at Iwakuni, is famed throughout all Japan. This picturesque stone structure is about 450 feet in length and is built in five semicircular arches. In its construction lead was largely employed instead of cement, and formerly every five years one of the arches was repaired, the entire structure thereby being renewed once in twenty-five years.

Resources and Industries. The agricultural resources of the plains and valleys of Japan heretofore have been the principal basis of the industries of her people. Silk is a staple product, though the culture of the mulberry-tree is confined to Niphon, and three-fifths of the raw silk comes from the central area west of Tokyo. It is still largely woven by the use of hand-looms, but imported machinery is now greatly increasing the manufacture of silk goods. Tea ranks next to silk in importance and finds its largest market in the United States and Canada. Rice is the staple food of the people and is grown everywhere in the lowlands. Cotton is cultivated, but it is of inferior quality to that of India, China, and the United States, and the bulk of the fiber used in the rapidly growing cotton-spinning industries of Japan is imported.

In the mechanical arts, metallurgy and pottery, the Japanese, like the Chinese, long have enjoyed a high reputation. The Japanese, however, excel the Chinese in the beauty of finish and the attractive qualities of their wares. In lacquer, enamel, and some other art works they are unequaled anywhere. Many industries of the Western world have been introduced, and there are now brush, umbrella, boot and shoe, patent medicine, watch and clock, and other factories. Ship-building, conducted at Nagasaki and Osaka, is being developed rapidly.

AN INTERESTING GAME

Few domestic animals are raised; milk, butter, and cheese have no part in commerce. The fisheries, however, are among the most important in the world. The camphor-trees of Southern Japan and Formosa yield five-sixths of the world's supply of camphor.

ON THE ROAD TO NIKKO

Nikko, "the sun's splendor," is a region of matchless shrines and magnificent mountain scenery, Art having allied itself with Nature to make Nikko one of the most beautiful places in Japan. Of the many famous temples within its sacred groves the sumptuous mausolea of Ieyasu and of his grandson, Iemitsu, are by far the most interesting. The approach to these celebrated shrines is entirely in keeping with their exalted character. Across the country, like stately colonnades, stand rows of giant Cryptomerias, and in their shadow, leading upward toward the heights, lies the road to Nikko.

Japan is not great in mineral resources. The copper mines at Ashio, the largest in Asia, furnish the only metal exported. Iron is produced, but falls short of home needs. Gold was discovered in paying quantities in 1899 in Yezo, and there is some silver mining. Coal is found in Yezo and Kiushiu and is exported to China. A superior quality of kaolin abounds, from which the famous wares of Japan are made. Antimony is exported from Shikoku. Sulphur also is an important product.

Historical. The early history of Japan is concealed by myth and legend. According to tradition, the empire was founded 660 B. C. by Emperor Jimmu, a descendant of the deities who created the islands; his dynasty still reigns, the present Emperor Mutsuhito, who succeeded to the throne February 13, 1867, being the 123d sovereign member of the ruling house. Authentic history begins about A. D. 400. The power of the Emperor, or Mikado, at first supreme, was weakened gradually by the development of a strong military class; and a feudal system analogous to that of Europe grew up, under which, although the Mikado remained the nominal ruler, the real power passed into the hands of great military leaders, or shoguns. During the twelfth century, after a struggle between rival chieftains, a dual system of government began and lasted until 1868. Under this system the Mikado, with his court at Kyoto, was still recognized formally as a ruler and received the homage of his feudal lords; but the all-powerful shogun, with a more splendid court at Yedo (now known as Tokyo), held the actual control. For over 400 years the daimios or feudal lords waged continual strife. In 1603, however, the great shogun Tokugawa Ieyasu established the supremacy of his house, and under his descendants the country enjoyed unbroken peace for nearly 250 years.

European intercourse with Japan was begun by Portuguese trading vessels which arrived there in 1543. Christianity was introduced by St. Francis Xavier in 1549, but in 1624 the religion of the Cross was interdicted and the country closed to foreigners. By 1638 the Portuguese were expelled and Christianity extirpated at a cost of about 50,000 lives. With the exception of a restricted trade with Dutch merchants at Nagasaki, Japan remained henceforth closed to

Western nations until the barriers were broken by the United States in 1854. Following the ill-treatment of American seamen shipwrecked on the shores of Japan, Commodore M. C. Perry sailed with a squadron into Tokyo Bay in July, 1853, and after protracted negotiations secured a treaty from the shogun, March 31, 1854, the first between Japan and a Western nation, whereby the ports of Shimoda and Hakodate were opened as harbors of trade, supply, refuge, and consular residence. Similar treaties, all containing the most-favored-nation clause, were soon granted to other powers, namely, Great Britain, 1854; Russia, 1855; Holland, 1856; France, 1858; Portugal, 1860; and the German Zollverein, 1861.

At the time of Perry's visit the seeds of rebellion against the shoguns had already taken deep root among the daimios, who were jealous of the usurpation of powers that belonged to the Mikado. The Imperial Court at Kyoto continued strongly anti-foreign; and the shogun's abandonment of the policy of isolation without the sanction of the Mikado brought about an uprising of the samurai, the military class, which caused serious civil disturbance. During this period of virtual anarchy, numerous anti-foreign outrages were committed, for which prompt punishment was inflicted by the powers concerned. Finally in 1864 a squadron of British, French, Dutch, and American ships destroyed the forts at Shimonoseki and exacted a heavy indemnity. In 1866 several of the most influential daimios united in a demand for the abolition of the shogunate and for a unification of national power in the hands of the Mikado. The demand succeeded. The shogun resigned in 1867; but it was only in 1868, after a sharp campaign between his partisans and the Imperialists, that the power of the shogun finally was crushed and the office abolished. Yedo, renamed Tokyo, became the Imperial capital. The leading daimios of the south and west voluntarily gave up their feudal fiefs, and the abolition of the feudal system was decreed in 1871. Although the daimios have lost their powers of government, they still retain their high social position, and a new aristocracy with these as its basis has been formed, consisting of five grades corresponding to the European titles of Prince, Marquis, Count, Viscount, and Baron.

During the struggle the leaders of the Imperial party had become so convinced of the superior resources of foreign nations that they urged the Mikado to abandon the former policy and cultivate intimate relations with the outer world, so that the Japanese might learn how to supply their deficiencies and strengthen their government. A special embassy was sent abroad to study foreign State systems. The Satsuma Rebellion, led by Saigo in 1877, a formidable but futile effort to restore the old order of things, was soon suppressed. Local assemblies were authorized in 1878, and in 1881 the Emperor proclaimed his intention to establish a constitutional form of government. A commission was sent to examine the constitutional governments of Europe and America, and after its return a constitution for Japan was drawn up, which was promulgated February 11, 1889. Under it the first national parliament assembled in November, 1890.

In July, 1894, a long-standing dispute with China over the independence of Korea and the right of both powers to maintain order therein, by means of armed forces, culminated in a war in which the Japanese achieved a brilliant and unbroken series of successes on land and sea. By the Treaty of Shimonoseki, which ended the war (April 17, 1895), China recognized the independence of Korea, and ceded Formosa and the Pescadores Islands to Japan. The mainland territory in the north, including the Liaotung Peninsula, with the naval stronghold of Port Arthur, was also ceded; but by a coalition of European powers comprising Russia, France, and Germany, Japan was forced, under threat of war, to relinquish this territory again to China.

While the war with China was in progress in August, 1894, Japan entered on the negotiation of a new series of treaties to replace her former conventions with the Western powers. The old treaties imputed to Japan, as was customary in all conventions with Oriental States, a position of inferiority as to standards of civilization and

A TEA PLANTATION

The above scene is characteristic of Southern Honshiu, the region in which the tea plant flourishes best in Japan, and where large areas may be seen clothed with the low, thick evergreen shrub. Tea, now the second export product in value of the empire, was introduced into Japan from China in A. D. 805. Among the tea plantations of the empire the most famous are those of Uji, dating from the close of the 12th century. The Japanese peasants who raise the tea plant prepare the leaves at their own homes and send their product to market under some fancy name chosen and used in each case by the particular family that uses the garden.

THE NIJO CASTLE, KYOTO

This castle was built by Ieyasu in 1601 and used by him as a temporary residence on his occasional visits to Kyoto. Here, April 6, 1868, occurred the memorable meeting between the present Mikado and the Council of State. In 1883 the building, which had been used as the office of the Prefecture of Kyoto, was taken over for the Mikado's household and created one of the Imperial summer palaces.

ideals of justice. In 1899, the new treaties, fifteen in number, became operative. In this agreement the Western powers for the first time recognized in an Oriental nation the attainment of full responsibilities as an independent State, and admitted to a footing of absolute equality with themselves a people not a member of the great family of Christian nations. Furthermore, by this treaty, the restrictions confining trade to a few open ports were removed, and the whole interior of Japan was thrown open to foreign commerce, industry, residence, and travel.

Meanwhile the military and naval organization of the Empire had been strengthened in preparation for hostilities whose approach was foreseen. The splendid victories of the war of 1904-5 with Russia gave such evidence of national virility and organizing genius as put beyond doubt the ability of Japan to rank as a new world-power.

A TEMPLE NEAR KYOTO

Many of the temples throughout Japan are magnificent examples of architecture in wood and are especially famed for the exquisite beauty of their carvings. Their vast tent-like roofs, frequently half hidden in a grove of trees, are characteristic objects in every landscape. Usually the Shinto temples are covered with a simple thatch of chamæcy-paris bark, but the covering of the Buddhist temples generally is of tiles.

Government, etc. The government of Japan since February 11, 1889, has been that of a constitutional, as distinguished from an absolute, monarchy. The Emperor is the paramount authority in matters of government. His executive powers are exercised with the advice of a Cabinet of nine Ministers of State appointed by and responsible to him. His legislative powers are exercised with the consent of the Imperial Diet, which consists of a House of Peers and a House of Representatives. The members of the Upper House consist of certain nobles and appointees of the Emperor. Those of the Lower House, 369 in number, are elected for a term of four years by limited popular suffrage. There is also a Privy Council, consulted by the Emperor on important State matters. Every law requires the sanction of the Diet. For local government the empire is divided into prefectures, in each of which are included municipalities and counties, with local assemblies and officials.

Public revenue is derived chiefly from taxes on land and saké (rice spirit), from the postal service, telegraphs, and railways, and from customs and excise duties, stamp duties, and the leaf tobacco monopoly. Japan adopted the gold standard in October, 1897, the effect of which has been beneficial to Japanese commerce by giving government bonds an international value. The army and navy of Japan are organized on modern European lines. Military service is compulsory for males between the ages of seventeen and forty years. Arsenals at Tokyo and Osaka supply arms and ammunition for the army. The navy compares well with those of European powers and has won important victories in warfare in recent years.

The Japanese system of justice has been reorganized on the lines of modern European jurisprudence, with a supreme court, provincial and other courts. The legal code is modeled chiefly after the German, that being preferred by Japanese experts to the English and American systems.

THE GREAT BELL OF CHION-IN

Chion-in, the principal monastery of the Jōdo sect, occupies a wooded eminence in the eastern part of Kyoto. On the right of the main temple, on a slight, pine-clad elevation, is the bell tower, containing the Great Bell cast in 1633. This bell, nearly eleven feet high, has a diameter of nine feet, and weighs seventy-four tons.

Education and Religion. Elementary education is compulsory. The schools are supported largely by the Government and by local taxation. Students go abroad to study, many of them being attracted to the universities of the United States and Germany. There are two Imperial universities—one at Tokyo, the other at Kyoto.

The Japanese language has structural affinities with the Turanian group, but no close resemblance to any known member of the stock. It is supposed to have been developed from the tongues of the northern tribes in China and Siberia, who in prehistoric times crossed from Korea. Unlike Chinese, the Japanese language is polysyllabic and has the verb after, instead of before, the object. The written language differs widely from the spoken tongue.

Japan has no State religion. Freedom of belief is guaranteed by the constitution. The principal forms of worship are Shintoism (twelve sects), the primitive religion, a system of nature and hero worship without moral code or doctrinal formulæ and without idols in its shrines; and Buddhism (sixteen sects and twenty-five creeds). Christianity has made important progress, the Roman Catholic, Protestant, and Greek churches numbering many converts.

People and Cities. The empire of Japan is, like most Oriental countries, thickly populated, having some 288 inhabitants to the square mile. The people of the empire comprise two distinct races—the Ainus and the Japanese. The Ainus were the aborigines, a hairy race, sturdy and warlike, who were gradually driven northward. Their descendants are found in Hokkaido and the Kurile Islands, now, through centuries of repression and conquest, amiable and docile. Traces of the flat-faced Ainu type, through admixture with the Japanese, are still seen in the northern provinces of Japan. The Japanese are thought to be a fusion of two or three tides of Tartaro-Mongolian immigration that flowed to Japan by way of Korea. A Malay strain also is supposed to have entered from the south, causing marked physical and temperamental differences from the Chinese and Koreans; but the Mongol type largely predominates in the straight hair, pallid complexion, and more delicate oval features of the better classes. Smallness of stature characterizes the whole race. The Japanese are to a remarkable degree like the French—mercurial, impressionable, versatile, artistic, polite, dexterous, warlike, and intensely patriotic.

STREET DECORATIONS, FESTIVAL OF THE NEW YEAR

The celebration of the Festival of the New Year is universal, and on its approach the streets are profusely decorated and all shops are closed. Innumerable Japanese flags, bearing on a white ground the great crimson disk, emblematic of the "Land of the Rising Sun," flutter from every archway and extend along either side of the street as far as the eye can see, while countless rows of paper lanterns, decorated with the same national emblem, add color and picturesqueness to the scene. The straw ropes, sacred symbols of Shinto from mythical ages, hang in festoons along the façades of the buildings. The varied decorations are puzzling to a foreign visitor, but each bears a meaning founded upon some belief or some tradition handed down from the past.

All the larger towns in Japan except Kyoto are situated in wide and fertile plains upon whose products their prosperity largely depends. Tokyo, the capital, on the Sumida-gawa ("gawa" meaning river), is accessible to vessels of light draft. Much artistic work in lacquer, bronze, and ivory is done here, and there are match, glass, hat, and blanket factories and chemical and engine works. Yokohama, practically the port of Tokyo, is connected by rail with the capital, eighteen miles distant. It has a spacious harbor near the entrance to Tokyo Bay, is favored by proximity to the greatest silk-growing district, and transacts more than one-half of the foreign trade of the empire.

FAÇADE OF A TEMPLE, SHIBA PARK, TOKYO

Within Shiba Park, which formed the entourage of the imposing Buddhist temple that was headquarters for the Jōdo sect in Tokyo from the close of the 16th century until 1877, are preserved a number of Mortuary Temples of the Tokugawa shoguns. These splendid shrines, which rank among the chief wonders of Japanese art, have a fitting courtyard in this handsome park with its wealth of lofty trees and beautiful shrubs.

Kyoto, called also Saikyo, the old capital of the shoguns, ten miles from Lake Biwa which supplies it with water, has important bronze, cloisonné, porcelain, brocade, and embroidery works. It sends much tea and raw silk to Kobé for shipment. Osaka, on the Yodo-gawa, which drains Lake Biwa, is twenty-six miles from Kyoto. It is the largest manufacturing city in Japan and the chief center of the cotton-spinning industry. Osaka has shipyards conducted on European lines. Its import trade is largely merged in that of Kobé, which is the chief outlet for the products of Central Japan.

Nagoya lies east of the central range of mountains in Niphon, in an extensive plain largely devoted to rice cultivation. Much porcelain and pottery is made in neighboring villages. Nagasaki, on the island of Kiushiu (Kyushu), has a landlocked harbor with extensive docks and shipyards that have the advantage of large coal fields in the vicinity. Hakodate is the emporium for the products of Yezo in agriculture, fishing, and coal. The chief exports of Niigata, on the western coast, are rice and petroleum.

Commerce. The foreign commerce of Japan has increased remarkably in twenty years, and is controlled largely by foreigners. The adoption of Western ideas by the Japanese has created a strong demand for European and American products. By the close of the century trade had trebled in value, in spite of the fact that a high protective tariff had checked the growth of the import trade. Great Britain and its colonies control the largest share in the foreign trade of Japan, but the United States stands in second place. The American Republic surpasses all other countries in rapid growth of commerce with the "Land of the Rising Sun." In exports of raw cotton, flour, and kerosene to Japan the United States is far ahead of all competitors and is gaining on Great Britain in locomotives and railway iron. Through its purchases of raw silk and tea the United States is Japan's chief customer. The leading exports of Japan are silk and silk goods, coal, copper, bronze, cotton yarn, tea (chiefly green), matches, fish products, straw braid, rice, matting, textiles, camphor, porcelain, and earthenware, and

lacquered ware. Chief among the imports into Japan are cotton and cotton goods, iron and steel manufactures, engines and machinery, locomotives and rolling stock, sugar, wool and woolen goods, kerosene, beans, peas, pulse, flour, meal, starches, oil-cake, leaf-tobacco, and leather.

The first railway in Japan, eighteen miles long, connecting Yokohama with the capital, was opened in 1872. Railway lines now stretch along the coast on both sides of the principal islands.

Japan in World Politics. Since the adoption of Western progress and the establishment of new industries by Japan its statesmen have found the policy of political expansion forced upon them. There are three reasons for this policy: Japan needs markets for its commercial products, it desires an outlet for its surplus population, and it feels that its territory must be guarded by strategic points that can be used for defense in case of attack by foreign powers. The recent advance of Russian power in regions formerly under Chinese control emphasized the necessity of action by Japan. Russia had an Asiatic seaport at Vladivostok, but its harbor is icebound so great a part of the year that its commercial value is small. Russia accordingly secured concessions from China by which a Russian railway was built across the Chinese region of Manchuria and more southern seaports secured on the Yellow Sea. At the same time Russian administration was extended over the immense region through which the railroad ran and Russian influence sought to secure control of Korea, which lies opposite the Japanese islands.

FUJINO-YAMA

Fujino-yama, or Fuji-yama, is the most celebrated of the many sacred mountains of Japan, and each summer thousands of pilgrims make the ascent to its summit. This majestic, snow-capped, volcanic cone rises in solitary grandeur from a broad, well-watered plain, environed with mountains, to a height of about 12,400 feet above the sea. From time immemorial Japanese artists have made its conical form one of the most familiar objects in Japanese painting and decorative art.

THE HARBOR OF NAGASAKI

Nagasaki is excellently situated at the end of a long, narrow bay in front of one of the deepest and safest harbors in Japan. The harbor, one of the most beautiful in the Far East, is protected on three sides by the wooded slopes of extensive mountain ridges, while on the fourth and western side lies the Island of Taka-boko.

The advance of Russia was felt by Japan to be a menace to its future. It meant actual control of the nearest portion of the Asiatic mainland, and therewith possession of military and naval vantage points from which Japan could be attacked. It also meant opportunity to weaken Japanese hold upon trade with China, a matter of vital importance because Japan annually exports an immense amount of its products to China and hopes to develop its trade still more. Still further, the Russian advance meant the loss to Japan of Korea, which is the logical field for Japanese colonization. Accordingly the island empire entered upon war with Russia in February, 1904, and forced that power to abandon most of its recent gains by the peace concluded September, 1905. In the latter year also Korea was forced to yield its independence by acknowledging a Japanese protectorate. Thus the rivalry of Russia was destroyed and the rule of the Mikado extended over an immense and valuable region on the mainland of the Asiatic continent.

Formosa. The island of Formosa (Taiwan), ceded with the Pescadores Islands to Japan by China in 1895, lies partly within the tropics. It is 245 miles long and sixty-five miles wide: area about 13,460 square miles. The mountains of the east side are the home of savage tribes and are only partially explored. The western plains, cultivated by Chinese settlers, produce much rice, sugar, hemp, and tea. Most of the tea, Oolong and other varieties used for blending and flavoring, is sent to the United States. In the center and east are large camphor forests which, under Government monopoly, produce annually about five-sixths of the world's total production. The chief ports are Tamsui and Kelung in the north, and Anping and Takow in the southwest. External trade is largely in British hands, but imports of American flour and kerosene are increasing.

JAPANESE BOATS, ODAWARA BAY

KOREA

Korea, "The Hermit Kingdom," known locally as *Cho-sen* ("Morning Calm"), was in 1899 officially named *Dai Han* ("Great Han"). The name Korea is derived through the Japanese and Portuguese from Ko-rai (Chinese Kao-li), the name of one of the early kingdoms in the peninsula. It consists mainly of a peninsula of Asia lying northeast of China, 600 miles long and 135 miles wide, with a number of islands adjacent, all comprising an area of about 82,000 square miles. The Tumen (Tooman) and Yalu rivers in the north form the natural boundaries between Korea and Manchuria.

Surface. Korea has a hilly surface with several mountain groups in the north and a forest-covered range extending southward. East of this range is a narrow, fertile strip bordered by a steep, rocky coast adjacent to deep water and having a few fine harbors. The western regions comprise rich valleys and slopes watered by numerous shallow, turbulent streams fringing off into groups of islands with dangerous tideways. The soil is very fertile and agriculture is the occupation of three-fourths of the people. Barley, millet, and oats are the chief crops in the north. In the south, rice, wheat, beans, and grain of all kinds, besides tobacco and cotton, are grown. Ginseng is an important article of cultivation and revenue under Government monopoly. The rainfall is ample. The climate, tempered in the hot, rainy season by sea-breezes, is

KOREAN CASH

The most common currency of Korea consists of masses of cheap alloy in coin form, strung upon cords of plaited straw. The picture represents the sum of $175. On shopping trips Korean notables have a strong man to carry the money that is needed for the day's purchases.

CITY GATE OF SÖUL, KOREA

The capital city of Korea, situated in a beautiful valley, grew out of a fortified camp established by a military chieftain about 400 B. C., and it continues to be encircled by walls of defense, although they are of little value except as against the Manchurian tribesmen. The barrier is eighteen feet high and is pierced by eight gates of massive stone-work, each surmounted by an elaborate roof similar to those found over the gateways of Chinese cities.

healthful for Europeans. Gold, copper, coal, iron, and galena abound, and mining concessions are now being operated by American, German, and English syndicates.

People and Religion. The Koreans are of Mongolian stock, tall, robust, and good-looking, but shiftless. The native language, classed as Turanian, differs from that of the Chinese, being polysyllabic and having an alphabet. It is related much more closely to the Japanese tongue. Chinese is, however, still the basis of education and culture. In dress, customs, and style of building the Koreans show the influence of the Chinese, but, unlike the latter, have retained caste distinctions. Confucianism is the religion of the State and the higher classes, but Buddhism grafted on fetishism is the faith of the masses. Education is largely based on the Chinese system and consists in acquiring the Chinese ideographs and classics. The only efficient schools are those managed by foreigners, among them an English school and a subsidized American mission school at Söul (Seoul).

History. Korean civilization came from China about the 12th century B. C. In the 13th century A. D., after many vicissitudes, the greater part of the country was incorporated in the Chinese Empire. With the exception of a brief period (1692–98) when it was held by the Japanese, Korea continued under the suzerainty of China until 1895, and for nearly three centuries acknowledged this status by sending annual tribute to Peking. In 1876, however, Japan signed a treaty recognizing it as an independent kingdom. Reform movements, introduced under Japanese influence, led to an insurrection in 1884, when Japan as well as China sent troops into Korea. Although these were withdrawn the next year, the rivalry of the two nations continued until 1894, when, following renewed outbreaks of disorder, Japan and China declared war upon each other over the disputed question of the independence of Korea and the right of both countries to send troops thither to maintain order. In 1895, by the Treaty of Shimonoseki, China formally acknowledged the independence of Korea.

In 1900 Russian influence began to be a potent factor in Korean affairs, but the outbreak in 1904 of the Russo-Japanese war saw the peninsula made a base for the Japanese armies, and the close of that struggle brought the creation of a Japanese protectorate.

Government and Commerce. The Korean state is a hereditary monarchy, without representative features. Its foreign relations are handled through the Japanese foreign office at Tokyo. Local administration is conducted by a group of ministers, many of whom are Japanese and all of whom work under the general supervision of a Japanese resident-general appointed from Tokyo. The more important cities are Söul, the capital; Chemulpo, its port; Fusan the principal port of Japanese traffic; and Phyöngyang, (Ping-yang), a commercial town of the interior. Railway lines extend from Söul to Chemulpo, to Fusan, and to the Chinese frontier. The capital city has telegraphic communication with the larger Korean towns, and with those of Northern China, while a cable connects Korea with the Japanese system. The postal system is managed by French officers.

Aside from agriculture, the chief industries of Korea are the manufacture of an excellent grade of paper, of cotton, grass-cloth, thin silks, horsehair gauze, salt, and iron and brass utensils. Foreign commerce, increasing in recent years, is largely in the hands of the Japanese. The principal exports are beans, rice, paper, hides, and ginseng. Of the imports more than one-half consist of cotton goods, other imports being kerosene, silk piece and woolen goods, metals, grass-cloth, and matches. Much European and American material reaches Korea by way of Japan and China. The country was opened to the commerce of Western nations by the treaty of 1882 with the United States, followed by treaties with various European powers, which assigned certain treaty ports as points of entry for goods.

MALAYSIA

MALAYSIA or the Malay Archipelago comprises all those islands lying off the southeastern coast of Asia that preserve a comparative continuity of physical formation and of Asiatic faunal, floral, and racial characteristics. Portugal owns the eastern portion of the island of Timor (Timur), Great Britain has a larger holding in Northern Borneo, and the United States, through its defeat of Spain in the war of 1898, came into possession of the Philippine Islands. The remaining islands of Malaysia are comprised in the colonial dependency known as the Dutch East Indies.

The majority of the people of Malaysia are Malays, a branch of the Mongolian stock, supposed to have been developed in Southeastern Asia by the mingling of Mongolian and Caucasian blood. Pure-blooded Malays are found in the Malay Peninsula and in the Achinese region of the Island of Sumatra. The race is typically short of stature, with olive-brown skin, round head, straight, black hair, high cheek-bones, and obliquely set eyes. Low Malay is the generally prevailing tongue on the coasts of the islands, but the native population of each island has one or more dialects peculiar to itself.

Physical Features. The tiger, rhinoceros, tapir, elephant, orang-outang, monkey, and various ruminants roam the islands, while the forests abound with woodpeckers, pheasants, barbets, and trogons. Palms, bamboos, laurels, oaks, and euphorbias are notable features of the vegetation. Hard woods, such as teak, ebony, and ironwood, and spice woods are a great source of wealth.

The climate of Malaysia as a whole is tropical and humid, but is generally temperate and healthful in the elevated regions. Along an equatorial belt about four degrees wide the rainfall is almost incessant, but outside of this belt there are well-defined wet and dry seasons governed by the monsoons and alternating with each other on the north and south.

Dutch East Indies. The Dutch East Indies, including Dutch New Guinea, which is attached to the Residency of Ternate in the Molucca Islands and has an area of 151,789 square miles, comprise an area of 736,400 square miles. A Governor-General is appointed by the States-General of the Netherlands, and he is assisted by a council without executive functions. Under him are Governors or Residents in the various provinces, and under them Controllers, these officials having wide administrative and judicial powers and acting as advisers of the native potentates, with whom a close intercourse is always maintained. Batavia, in Java, is the capital. Agricultural pursuits engage the greater part of the population. The principal exports are coffee, rice, sugar, salt, tin, tea, indigo, cinchona, tobacco, gums, nutmegs and other spices, sulphur, and petroleum.

Java is the most fertile and densely populated of all the Malay islands. Except on the low, swampy northern coast, its entire surface is mountainous, its many peaks ranging from 9,000 to 12,000 feet in elevation. Its soil consists mainly of volcanic mud thrown out from craters, of which Java contains more than any other equal area on the earth. There are numerous rivers, but few are at all navigable.

Sumatra lies under the equator. The Barisan Mountains traverse the island from end to end near the western coast. Eastward the range slopes down to a wide alluvial plain, drained by many navigable streams and dotted with lakes. Dense forests containing gutta-percha and camphor and other valuable trees cover the mountains. To the east, Banka, Billiton, and the Riouw-Lingga group are noted for the large output from their tin mines.

SCHOOL AT PADANG

Very striking are the homes of wealthy Malays in the Padang district, some of which have become schoolhouses. Their high roofs rise into sharp points covered with bright tin, and close to each house is a rice-barn, similarly roofed and supported on posts.

Dutch Borneo is mountainous with intervening low alluvial valleys drained by many tortuous rivers navigable for small boats. The coasts have an unhealthful climate. With the exception of gold, diamonds, and coal, the rich mineral resources of the island have been but little worked. Celebes, a mountainous nucleus from which radiate four peninsulas of hilly formation;

THE RIVER ENTRANCE AT PADANG, SUMATRA

The chief town of the west coast of Sumatra is Padang, which stands on low ground a little back from the ocean shore and on the banks of Padang River. The high hill called the Apenberg dominates the river entrance. On the lower edge of the city and near the river mouth are the great warehouses maintained by the Netherlands government for the storage and inspection of the tea and coffee exports. The city itself is an attractive colonial town with broad avenues, lined by cocoa palms and faced by neat wooden residences of Europeans.

and the Molucca or Spice Islands, scattered groups of volcanic islands, coral reefs, and crystalline rocks, as yet but little explored, are also Dutch possessions.

British Borneo. British North Borneo, with Labuan Island, and the protectorates of Brunei and Saráwak have a total area of about 84,000 square miles. The region that is now controlled by the British North Borneo Company occupies the northern part of the island. The surface is mountainous and densely timbered. The exports comprise timber, gums, tobacco, sago, rice, coffee, pepper, cocoanuts, rattans, trepang, seed-pearls, and edible birds' nests. The chief town is Sandakan on the northeastern coast. Labuan has important coal-mines and sago-mills. Saráwak, whose area is about 50,000 square miles, is a British protectorate. Coal is extensively mined, and sago, gambier, pepper, dried fish, and gutta-percha are exported.

CARRYING COFFEE TO MARKET

From the plantations of the interior the Sumatra coffee crop reaches the coast, partly by railway and partly by carts which traverse the country highways. The picturesque two-wheeled vehicles used in this work are usually drawn by the buffalo, the principal draft animal among the Malays.

HOMES OF MALAY FISHERMEN AT SINGAPORE

The great public buildings and extensive business quarter of Singapore are emphatic reminders of the extent of European influence, but on the outskirts of the famous trading port the life of the Asiatic people continues serenely oblivious of alien ways. Within sight of the city's water front, crowded with the shipping of the world, stands a primitive village of Malay fishermen, built above the ebb and flow of the tidal waters, where the natives live, as did their ancestors centuries before them.

Portuguese Timor. The northeastern half of Timor, with the district of Ambeno on the north coast, and the small island called Pulo Kambing are Portuguese and aggregate 7,330 square miles. Deli is the administrative center. The territory is very little developed, although there are a number of trading posts in the region and some export of coffee and wax. The mineral wealth, known to be great, awaits capital and attention. A small military force, chiefly of natives, serves as constabulary. The country is unhealthful for European residents.

Straits Settlements. The Straits Settlements on the western coast of the Malay peninsula form a British colony similar physically and racially to the islands of Malaysia. The colony comprises Singapore, Malacca, and Penang (including Province Wellesley and the Dindings), the Cocos or Keeling Islands, 700 miles southwest of Sumatra, and Christmas Island, 200 miles southwest of Java. The total area is about 1,542 square miles. The colony is administered by a Governor and Council. The town of Singapore, on the southeastern side of Singapore Island, is the capital and one of the greatest shipping centers of the world. George Town or Penang is the trade emporium for the northern parts of Sumatra and the Malay Peninsula.

Federated Malay States. The Federated Malay States, which were united under a federal administration in 1896, are Perak, Selangor, Negri Sembilan, and Pahang. The total area is about 27,500 square miles. The native rulers are advised by British Residents, subject to instructions from the Resident-General, who is himself under the supervision of the Governor of the Straits Settlements, acting as High Commissioner. Supreme authority in each State is vested in the State Council, consisting of the highest native authorities and the principal British officials there resident.

Perak and Selangor, the most northerly States, are important tin-mining regions. Negri Sembilan, since 1895 including Sungei Ujong, is a confederacy of small States in the interior. A railway connects Seremban, the capital, with Port Dickson on the Malacca Coast. Tin-mining is the chief industry of the States, but agriculture is advancing. Pahang, also a great mining State, is on the eastern coast. Johor is a sultanate at the southern extremity of the peninsula. It embraces very extensive agricultural areas.

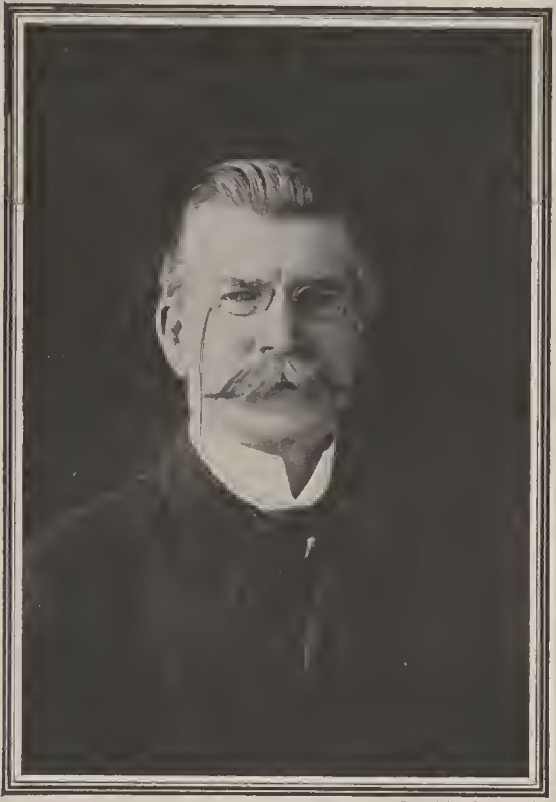
THE SIVA TEMPLE AT PRAMBANAN, JAVA

Near Prambanan are the famous shrines of Loro Jongran. Here once stood eight temples about an open quadrangle, the whole surrounded by a triple enclosure. The buildings were probably wrecked by an earthquake, and of the few now in place one is the Siva Temple. In its four stone chambers the ancient statues of Eastern deities await in stony silence the return of the worship to which they were once accustomed.

THE PHILIPPINES

THE PHILIPPINES, an insular dependency of the United States, forms the more northerly portion of the Malay Archipelago and lies east of French Indo-China. At the north the islands approach within about ninety miles of the Japanese colony of Formosa, while at the south a space of about thirty miles lies between the islands and the outlying islets of British Borneo. The entire area of the Philippines is reckoned at 832,968 square miles, or in land area alone, 115,026 square miles. The Sulu group of islands forms a part of the more southern extension of the archipelago.

The most important portion of the native races is the group of eight civilized tribes of Malay descent which inhabit Luzón and islands to the south — the Tagalogs, Visayans, and others. These people are Christians and show great capacity for progress. The Moros are Mohammedans, inhabiting the Sulu group at the south, having a crude political system and a social system in which polygamy and slavery play a part. Scattered through the archipelago are also large numbers of Chinese merchants and laborers.



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THE GOVERNOR-GENERAL

Luke E. Wright, of Tennessee, was made a member of the Philippine Commission in 1900. In 1904 he succeeded to the place of Civil Governor and in 1905 became the first American Governor-General.

THE LUNETA, AS SEEN BY DAY

South of the walled city of Manila lies the Paseo de Luneta, the city's famous seaside promenade. At the close of each day a military band takes its place in the center of the plaza, which fills with people from all grades of Manila society, who promenade on the walks or drive slowly along the roadways overlooking the bay.

Physiography. The two large islands of the archipelago are Mindanao, with an area about the same as that of Pennsylvania, and Luzón, which is close to Virginia in size. Nine other islands, much smaller than these two, are yet large enough to outrank Rhode Island in area. Several hundred still smaller islands make up the total of the group. As a rule, the Philippine Islands are mountainous, the smaller masses having central peaks or ridges from which the land slopes rapidly to the sea, while the two greater islands show rather extended configurations of ranges and interlying valleys. In general, the island ridges trend north and south. The highest peaks are Apo in Mindanao (10,312 feet), Malindang in Mindanao (8,580 feet), Mayón or Albay in Luzón (8,274 feet), and Canlaón in Negros (8,192 feet). There are several large volcanic areas in the Philippine group and earthquakes are not infrequent, shocks of greater or less violence occurring to the number of about a dozen every year. The volcano of Mayón, in Albay Province, is famous for the beauty of its cone. As is usually the case in volcanic regions, hot springs and mineral waters abound.

Of the Philippine rivers few are of importance. The Rio Grande de Cagayán is the most notable. It flows northward in Luzón, draining the slopes of two mountain ranges and forming a great internal waterway which can be navigated by light-draft steamers. In Mindanao the Rio Grande and the Agusan are both streams of considerable size. The Pásig River, through which the waters of Laguna de Bay reach the ocean, passes through the city of Manila and is navigable inland for fifteen miles.

Climate, Flora, and Fauna. The coast regions of the Philippines are humid and, excepting the eastern coasts of Mindanao, Leyte, and Sámar, are very hot, like those of other regions of the tropical latitudes. In the three islands above named the temperature along the coast is moderated in the summer months by the cool oceanic current that comes from the east. The extensive mountain areas of the group also are temperate because of their altitude. Records of temperature show that at Manila a normal mean of 77° prevails throughout the year, with a maximum of 96°, while at Benguet, in the Caraballos Mountains, the mean temperature is 62°, with a maximum of 75° and a minimum of 46°. From May to November is the rainy season of the islands, with heat at its greatest. During this period, especially from July to September, terrific cyclones, called *baguios*, cross the islands in their westward course toward the China Sea.

The flora of the islands is akin to that of Sumatra, being tropical and extremely varied in species. The

GOVERNMENT HEADQUARTERS AT MANILA

The chief building used by the American colonial establishment in the Philippines was once the Ayuntamiento or City Hall of Manila. Since American occupation it is generally called the Administration Building. Like the other public edifices, it is of modern construction, older buildings having mostly been wrecked by earthquakes. The balconies beneath its windows are almost the only evidence of Spanish influence in its architecture.

bamboo, palm, and banyan are the more characteristic trees. In the thick jungle-like growths of the lower lands occur an infinite variety of plants and shrubs remarkable for their beauty and valuable for their products. The fire-tree, which bursts into a mass of flaming red blossoms, is used as a shade-tree in the cities, where it is a characteristic growth.

Few large mammals exist in a wild state. The water buffalo, deer, and wild hog are common, and small wildcats exist in the forest, but the greater carnivora are absent. There is a single species of monkey. Reptile life is extensive, venomous serpents being abundant and crocodiles plentiful in the lagoons and interior lakes. The bird life of the islands shows many of the usual tropical varieties and some species not found elsewhere.

Natural Resources. Immense forests exist in all the important islands, the forest wealth of the archipelago being almost beyond computation, not only because of its abundance but also for its varied quality. The native woods include the cocoanut and other palms, ebony, ironwood, cedar, mahogany, camphor, gutta-percha, rubber, teak, and many fine hard woods. Certain kinds are much used in shipbuilding, because of their toughness and strength. There are many gum-producing trees, and also medicinal and dye plants, shrubs, and trees. The variety of fruit-trees is very large, including the orange, citron, breadfruit, mango, cocoanut, guava, tamarind, rose-apple, and many other species. Important vegetable products are bananas, plantains, pineapples, sugar-cane, cotton, tobacco, coffee, hemp, indigo, cacao, cinnamon, vanilla, cassia, areca nut, ginger, and pepper, besides rice, maize, and other cereals.

Enough is known of the mineral resources of the Philippines to indicate their value, but not their extent. Lignite deposits exist in most of the islands. The best grade of these are on Batán Island, in Southern Mindoro, in Cebú, in Southern and Eastern Mindanao, and in Negros. In Batán the Government is operating mines for its own use, while a corporation is opening deposits and constructing an electric railway to carry coal to Calanaga Bay for shipment. Work is also carried on in the Danao and Compostela coal-fields of Cebú. In the province of Lepanto, Northern Luzón, are copper deposits that have been worked for centuries by the Igorotes. Argentiferous lead occurs in important quantities at Torrijos, on the island of Marinduque, also near the town of Cebú, on the island of the same name. The three most extensive gold fields are located in the province of Ambos Camarines, in Northeastern Mindanao, and on the island of Panaón. In many localities on the island of Luzón the precious metal is found in alluvial deposits. In the province of Bulacán lies a belt of magnetite iron ore, and iron is also found abundantly elsewhere in Luzón, and in the islands of Cebú and Panay. Petroleum also occurs in the islands of Panay, Cebú, and Leyte, but the deposits have not een thoroughly investigated. Veins of excellent marble have been unearthed in the island of Romblón, and the stone is also quarried in the province of Rizal, Luzón. Kaolin has been found at Los Baños in Laguna Province, and potters' clays exist in many localities. Platinum is reported to exist in Mindanao.

Industries. The agricultural resources of the islands are very great, though imperfectly developed. The cultivation of sugar-cane, cotton, indigo, cacao, coffee, and tobacco is capable of almost unlimited extension. "Manila hemp" is derived from the leaves of the abaca, which thrives only in Philippine soil. The best hemp is raised in the islands of Leyte and Marinduque and in Luzón. The Philippine sugar industry in all of its branches is much more advanced in the islands of Panay, Negros, and Cebú than in Luzón. Tobacco of fine quality can be grown if properly cultivated. Rice and corn are the only cereals grown to any great extent. The average annual production

NATIVE CHIEFS

The Moro-Malay chiefs of Mindanao are somewhat pretentious in costume and manner, and on occasions of ceremony are resplendent in gorgeous silken garments.

SUBURBAN STREET OF MANILA

San Sebastian or Quiapo is one of the finest of the residence suburbs of Manila. It lies near the Pásig River and contains the homes of many of the wealthier Filipino families. The broad streets are lined with neat and well-built houses.

A GLIMPSE OF THE TOWN OF SULU

The town of Sulu is one of the most attractive colonial settlements of the Far East. The place practically owes its creation, it is said, to a Spanish general who was assigned to service in this supposedly unhealthful spot to meet his death, but who vigorously redeemed the site and extended Spanish authority, whereby he won great credit and grievously disappointed his enemies. Broad, clean streets, lined with stately tropical shade trees, and homes with white walls and wide verandas are notable features.

CARABAO AND NATIVE CART

The patient carabao, a domesticated variety of water buffalo, is the chief drudge of the laboring Filipino. Its broad feet make it an ideal animal for work in cultivating the marshy rice-fields or in draging loads along the muddy highways.

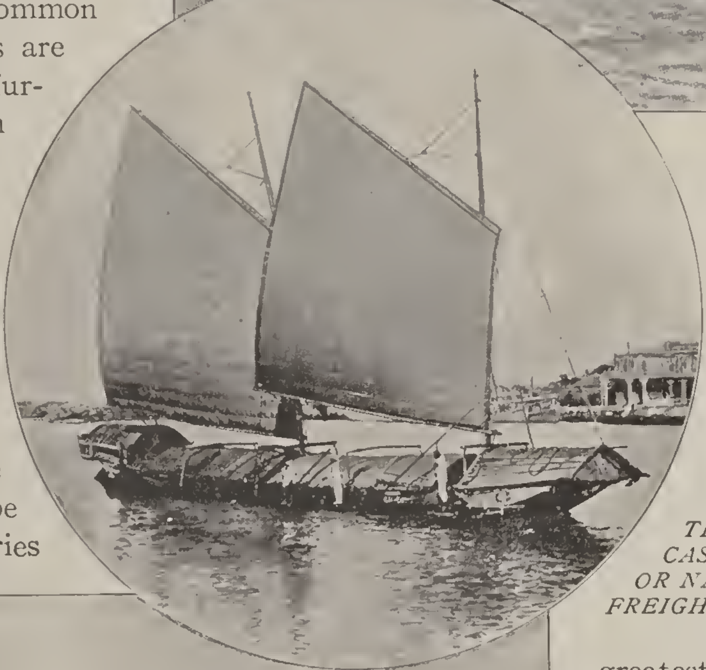
of rice is not sufficient for the great local demand, however, and in some years large amounts are imported. Corn is the principal crop in the Luzón provinces of Cagayán and Isabela and in other parts of the archipelago. Coffee of fine quality is grown in the province of Lepanto. Stock-raising has been carried on for many years in certain districts where nutritious grasses abound. There are vast stretches of good grazing lands where cattle ranches could be conducted profitably. The banana-tree is the source of much of the natives' food supply and is common in their villages. Cocoanut palms are grown largely for the nuts, which furnish copra, the demand for which exceeds the supply. Gutta-percha and spices are derived from the forests of Mindanao.

Manufactures of a simple kind long have existed. Cloth is woven from hemp and pineapple fiber, as well as from imported cotton and silk. From rattan, palm leaves, bamboo, and other material are made mats, bags, and hats. Rope and cordage is an output of factories near Manila. Cigars and cigarettes are made in large quantities for export. There are sugar-mills in Negros and Pampanga, and refineries at Manila and Malabón. Alcohol and wine are made at hundreds of points in small quantities. The preparation of indigo for market is a home industry. Vegetable oils, cocoanut oil, soap and starch are manufactured in numerous small establishments or at the homes of the people. Boat-building is widely engaged in by the natives.

Commerce. There is but one railway in the archipelago, extending from Manila north to Dagupan, about 120 miles. The only means of communication between the towns and villages on the different islands are by cart roads, horse trail, or foot path, the most of these being virtually impassable in the rainy season. Native boats carry freight from one island to another. For telegraphic communication, the United States Government has linked the islands together by a system of land lines and cables about 10,000 miles long. The Pacific cable, completed in 1903, connects this system with the United States, and another cable connects it with Hong-kong.

THE BRIDGE OF SPAIN

The Spanish rulers of Manila completed in 1875 the Puente de España, or Bridge of Spain, which crosses the Pásig River, connecting the old walled city of Manila with Binondo, the commercial district of the modern municipality. It is a handsome stone structure, about 350 feet in length, resting on massive arches.



THE CASCO OR NATIVE FREIGHTER

The import trade of the Philippines has as its greatest feature the purchase of rice from French Indo-China. Next to the French dependency the United States is the greatest source of imports, closely seconded by Great Britain. Of the exports from the islands, hemp, the most important article, goes to the United States and Great Britain in about equal quantities; sugar is sent to Hong-kong, Japan, and China; copra is bought by France, tobacco by Spain, and cigars by Hong-kong merchants.

Chief Towns. Manila, the capital, is divided into two nearly equal but very dissimilar parts by the Pásig River, which is spanned by three bridges. Manila proper, the old walled town, is on the southern bank of the stream, and contains the Governor's Palace and various buildings used for civil and military purposes. Iloílo is a seaport, situated on the southeastern coast of Panay, and is the second commercial city in the archipelago. Cebú, on the eastern coast of the island of Cebú, of which it is the capital, is a place of great historic interest. The city is well built and the climate is dry and healthful.

Lipá, in Batangas Province, is the center of a fertile agricultural district, and has connection with other towns by important wagon roads. Balayán, port and military station in Batangas Province, is a source of supplies for vessels and the market town of a farming district. Albay, capital of Albay Province, lies in the vicinity of the famous volcano Mayón and is a trade center of some activity.

GATEWAY AND ANCIENT WALLS OF MANILA

Old fortifications, erected about 1590, still surround the older portion of Manila and are picturesque reminders of the strenuous times of Spanish conquest. Their massive fronts of faced stone even now would be excellent defense against ordinary artillery. Of the several gates that pierce this barrier, that one which stands close by the Governor's palace, on the Pásig River side, is an interesting example.

Laoag, on the Laoag River, provincial capital of Ilocos Norte, is a beautifully situated and well-built town that has considerable trade, being a port for coasting vessels.

Taal, a port and military station on the Pansípit River, is well-built and has good schools and markets. Zamboanga is a provincial capital and the chief seaport of Mindanao. It has a fort, hospital, and many stone houses, and is a shipping point for hemp, copra, and gutta-percha. Sulu or Joló, capital of the Sulu islands, is a walled town with military barracks and official residences. Near it are famous pearl fisheries, for whose output it is the depot.

The Insular Government. The government of the Philippines is vested in a Philippine Commission, consisting of eight members appointed by the President of the United States, three of whom must be Filipinos. The president of the Commission holds the executive office of governor-general over the dependency, while the remaining American commissioners share among themselves the four administrative secretaryships of commerce and police, interior, finance and justice, and public instruction. Legislative power is held by the Commission as a body. There is a supreme court composed of one chief justice and six associate justices. For local government the islands are divided into forty civil provinces, the municipality of Manila, and some specially organized provinces. Manila is governed by an appointive commission. The civil provinces are each governed by a board consisting of the provincial governor, treasurer, and supervisor, the first named being usually a Filipino, while the others are Americans. The provinces in Mindanao and the Sulu archipelago have special governments with military features. The authority of the United States is maintained throughout the islands by military garrisons under the direction of a division commander located at Manila. These garrisons are supplemented by detachments of companies of Philippine scouts, organized solely for colonial service. Much of the police work, however, is done by the Philippine constabulary, a civil force of foot and mounted men organized under military discipline and controlled by the Insular Government.

THE PRINCIPAL BUSINESS STREET OF MANILA

With its thirty feet of width crowded in the busier hours of the day by countless vehicles and a struggling mass of pedestrians, the Escolta is one of the famous avenues of the Far East. The business buildings seen here are too frail in appearance to be imposing, but their strong frames and light walls are admirably adapted to a tropical country where earthquake shocks often occur.

HOME OF THE POORER CLASS

The characteristic native home in the Philippines is a hut of nipa-grass fastened like thatch upon a light frame of some convenient wood. The windows are often fitted with movable screens, made of the same material. These houses are serviceable against the sun's heat and torrential rains, but are extremely light in weight and are likely to be wrecked by heavy winds.

TAGALOG GIRL OF MANILA SELLING FRUIT

Religion and Schools. The tribes of the islands that stand lowest in the scale of culture are pagans as to religion. In the southern provinces the Moros and allied tribes are Mohammedans of the most fanatical kind. Christianity was introduced into the archipelago through the progress of Spanish conquest. Under Spanish rule the Roman Catholic faith was maintained in the islands by an established church system, but under American rule there is no state church. The Christian tribes are still Roman Catholic in belief. but state support is not given to the priesthood. Protestant missions are being established in the islands, and an independent Philippine Church has been organized after the Roman Catholic model by seceders from the older church.

An extensive system of public schools has been organized by the American Government. Primary schools are under municipal control and secondary schools under provincial control. There is a normal school at Manila, and emergency normal schools are located at several places to satisfy needs. Schools for manual trades, agriculture, telegraphy, and navigation have also been organized to aid industrial conditions. Besides the public schools there are a number of Roman Catholic denominational schools at various points.

Historical. In 1521 the navigator Magellan entered the Philippines and took possession of the country in the name of the King of Spain. In 1565 Miguel Lopez de Legaspi landed on the island of Cebú and established Spanish rule, which lasted 330 years. Frequent revolts occurred, the last in April, 1898. American warships under command of Commodore George Dewey, on the morning of May 1, 1898, entered Manila Bay, demolished the Spanish fleet, and gained control of adjacent shores. A few weeks later American troops arrived, and with the surrender of Manila to the invaders in August the control of the Philippines by Spain ended.

Manila remained under American occupation until the treaty of peace of December 10th, by which Spain ceded the islands to the United States. Meanwhile, an insurgent congress, at Malolos, September 29th, declared Emilio Aguinaldo President of the Philippine Republic, and, following the cession by Spain, there began preparations for war against the new owners of the islands. Actual outbreak of hostilities occurred February 4, 1899. After a long guerrilla warfare, Aguinaldo was captured and American rule was enforced by a military government, which established quiet conditions. By proclamation of the President of the United States July 4, 1902, the administrative control of the Philippines was transferred from military to civil authorities and amnesty was extended to the Filipinos charged with political offenses. After the establishment of peace in the dependency the most important problem was the settlement of the claims of the monastic orders, whose landed possessions and vested privileges had been great under Spanish rule. The policy of purchasing their lands was adopted by the United States in order to eliminate their influence without doing injustice to them.

ALGERIA—TUNIS—MOROCCO

NORTHERN AFRICA, extending from Tripoli westward to the Atlantic Ocean, and bordering for the most part upon the Mediterranean Sea, comprises three political areas, over which French influence is dominant. Algeria, the central portion of the area, is a French dependency. Tunis, the eastern region,

NEW MOSQUE, ALGIERS

Facing the Place du Gouvernement is the so-called New Mosque, said to have been built about 1660 from plans by a Genoese architect who was promptly executed when the Dey discovered that the edifice was in the form of a Greek cross.

is a Mohammedan State nominally ruled by its own sovereign, but actually directed by resident French officials. Morocco, the western area, is an independent Sultanate over whose political relations France wields a potent influence. Within this region are also several small districts belonging to Spain. Formerly the four States of Morocco, Algeria, Tunis, and Tripoli were collectively termed the Barbary States, a name derived from the Berbers, one of the native races of the country. The supposed boundary of the Barbary States was a vague line corresponding roughly to the northern edge of the desert of the Sahara, but at present large portions of the Northern Sahara have been brought under direct French control, being attached to the government of Algeria, and south of Tripoli another large district of the Sahara acknowledges Turkish sovereignty. The power of Morocco does not, however, extend far southward from the Atlas Mountains, although the Sultan claims authority there.

Surface Features. The entire region north of the sandy desert is upland, rising from the sea in rocky cliffs and, from the great range of the Atlas Mountains, sloping inland gradually to the great wastes of the Sahara. The Atlas Mountain system, extending from southwest to northeast and flanked along the Mediterranean coast by a range of hills, forms the common backbone of Morocco, Algeria, and Tunis, and contains the greatest range of sustained elevation in Africa. The coastwise mountain rim that nearly surrounds the African continental plateau nowhere else rises so high above the sea, since the mountains of the equatorial interior that surpass the Atlas peaks in elevation occur in groups rather than in extended ranges.

The Morocco Atlas consists of four great chains running nearly parallel. The High Atlas, beginning near Cape Gir on the Atlantic Ocean and extending into the western part of Algeria, nearly cuts off communication between the northern and southern parts of Morocco. The passes are high and difficult, the principal one, south of the city of Morocco, being 12,000 feet in elevation. The Tizi Tamjurt (about 15,000 feet) is probably its highest peak. North of the High Atlas is a range called the Middle Atlas. South of it are the two ranges of the Anti-Atlas and the Jebel Bani, from which transverse mountain groups connect with the High Atlas.

In Algeria the Atlas Mountains cease to be a continuous range, but the name is still applied to the highly diversified system of mountains and table-lands that extends eastward into Tunis. Western Algeria is occupied by a broad plateau

PALACE OF THE GOVERNOR-GENERAL, NEAR ALGIERS

The summer palace of the Governor-General is in one of the suburbs of Algiers. Mustafa Supérieur, where it is located, is a residence district about two miles from the city, whose great elevation and exposure to the cool Mediterranean winds have attracted the wealthier French and Arab families. The palace was the country home of the Algerian sovereign before the French conquest. The extensive gardens, pine woods, and handsome villas that surround it make the location a charming one.

from fifty to eighty miles wide, with a mean height of from 3,500 to 4,000 feet, the southern escarpment of which is the High Atlas Range. From the northern escarpment, which lies close to the coast reaching elevations of from 5,000 to 6,500 feet, the table-land descends to the sea in a series of ridges and exceptionally fertile valleys known as the Algerian Tell. The Tell ends in about the longitude of Algiers, and the mountainous coast region between that point and the Tunis boundary is called by the French Kabylia, from the Berber Kabyles who dwell there.

OLD ROMAN ARCH, TIMEGAD

About twenty miles from the city of Batna are the extensive ruins of an old Roman metropolis, formerly Thamugas, now Timegad. Here are the walls of ancient temples, theatres, and forts surrounded by street after street of stone houses. High above them all rises the form of the great triumphal arch built in the 2d century by order of the Emperor Trajan.

River Systems. The hydrographic system of these regions is very deficient in utility, for the dried-up watercourses and the wadies that contain water only part of the year constitute by far the greater number of what appear on the map as rivers. The streams that flow to the coast are in general short, owing to the proximity of the mountains to the sea. Although swollen by winter rains, they become diminutive rivulets or entirely disappear in summer. The streams that flow toward the interior are dry for the greater part of the year, and even

ALGIERS AS SEEN FROM THE HARBOR

The French capital of North Africa, once the chief haunt of the terrible Barbary corsairs, is located on the steeply sloping sides of high hills, and from the water's edge the buildings rise one above another, giving the impression of a series of terraces. The lower part is quite European in character. Its broad avenues, well paved and well kept, are lined with great buildings of the conventional European style. Along the harbor front a wide roadway, raised high above the waters by a great viaduct, has a most striking appearance. Above the European city is the Arab town.

when they contain water their discharge is by infiltration into the sands of the desert. The chief rivers, the Mejerda in Tunis and the Seybus, Sheliff (Cheliff), and Tafna in Algeria, follow the valleys of the northern escarpment for considerable distances in courses parallel to the coast. The longest rivers are those of Morocco, which drain chiefly into the Atlantic Ocean, but on account of absorption into the sandy soil, and diversion of the water for irrigation purposes, nearly all of them become mere creeks by the time they reach the sea.

Coast-line. The coast-line extends from Cape Jubi to the Strait of Gibraltar on the Atlantic Ocean, and from the strait on the Mediterranean east to Cape Bon, opposite the island of Sicily, thence southward to the Tripoli frontier. The entire line exceeds 1,800 miles in length. Except around Tunis, the coast is remarkably regular, with few well-defined capes or deep indentations. By far the best harbor on the Morocco coast is that of Tangier. Casa Blanca (Dar-el-Beida), on the Atlantic, is situated on a deep, though exposed, roadstead, and Walidiya, on a broad lagoon farther south, might be made an excellent harbor. The best roadstead on the Mediterranean coast is formed by the Zaffarines Islands, which belong to Spain. The Algerian seaboard is only slightly less monotonous in its characteristics than that of Morocco, but the coast of Tunis is deeply indented by three gulfs, Tunis on the north and Hammamet and Cabes, or Gabes, on the east. Bizerta Bay, on the north shore, west of the Gulf of Tunis, offers probably the safest and most commodious anchorage on the African shores of the Mediterranean Sea.

Climate. The Atlas regions ordinarily enjoy a climate which, although quite hot, is, except along some of the coastal and upland marshes, comparatively free from the fever-breeding malaria for which parts of Africa are dreaded. The rainfall, generally speaking, decreases from west to east, Morocco receiving the most abundant and the best distributed precipitation. All of the coast lands have a winter of rains, continuing from October to March, and a dry season lasting from April to September. Morocco is shielded by the High Atlas Range, and Algeria and Tunis by the Atlas of Sahara, from the scorching winds from the desert. In the north the winters are mild and the summer heat is tempered by breezes from the Mediterranean Sea. In the interior plains, and especially the great plain of Morocco, is a district of intense heat in summer and torrential rains in winter.

Flora and Fauna. The Atlas lands have suffered much from deforestation in Algeria and Tunis, yet there remains an immense area under timber. In Morocco, on the mountain slopes and in the better-watered plains, are magnificent forest growths. In the milder north the tropical and subtropical floras mingle; in the southern oases the tropical forms predominate, the fruit of the date-palm being the staple food of the dwellers in the desert. The prevailing trees in the north are the cork-oak, evergreen oak, fir, cedar, carob, acacia, arborvitæ, and arbutus. Farther south flourish the ironwood, mimosa, olive, and almond, while sorghum, barley, maize, wheat, rice, lentils, saffron, henna, sesame, millet, anise, coriander, flax, and hemp are among the numerous plants of recognized economic value.

The fauna of the Atlas lands is distinctively African, including, among carnivora, the lion, panther, hyena, jackal, and bear. There are wild boars in the forests, and antelopes, gazelles, and wild sheep in the mountains; while eagles, falcons, and vultures, game-birds, herons, pelicans, and swans are numerous. The stork and the swallow are found in large numbers and render valuable service, for their food is that scourge of the plateaus, the locust.

BEDOUIN CHIEF

The descendants of conquering Arab tribes who forced their way into North Africa centuries ago are now nomadic people of the interior oases. In the coast cities, and in Tunis especially, the red fez of the Bedouin is a common sight.

The Sahara. Directly south of the Mediterranean coast region lies the largest desert in the world, having an estimated area of from 2,000,000 to 3,000,000 square miles, and practically without vegetation except in occasional oases. The primary cause of this sterility is found in the fact that the prevailing northeast trade winds, blowing over this area, bring to it almost no moisture, having been drained of their vapor in passing over the great continental areas to the north. Clouds from the southeast do not discharge their moisture till they strike the Atlas Mountains. The Sahara is not a vast plain everywhere strewn with sands, but is a plateau of diversified structure, with mountain groups, sometimes 5,000 feet high, and many dried-up water-courses. Regions of dunes and steppes overgrown with alfa alternate with hamadas and sandy wastes. The average elevation of the plateau above the sea-level is 1,500 feet. The annual rainfall of this region, never more than five inches, is usually much less, and the rains that come sink as they fall,

through the dry and rocky surface of the land. Underground springs exist throughout the desert and to these the existence of the oases is due. They are readily reached by artesian wells, by means of which the French have already reclaimed large areas in the desert, on which they cultivate groves of date-palm. From Lake Melrhirh, 280 feet below sea-level, south of the Eastern Atlas region, a belt of depressions extends eastward on a line with the gulfs of Cabes and Sidra. It has been more than once proposed to flood a part of the Sahara by turning into it by a tunnel the waters of the Mediterranean Sea. It would be possible, by admitting the Mediterranean waters from the Gulf of Cabes, to connect the Algerian and Tunisian shotts or saline lakes, flood large areas, and thus to reclaim a large part of the land, making cultivation possible.

THE WALLS OF AIN SALAH

The slow but steady advance of the French toward dominion over the great Sahara was marked in 1899 by the occupation of Ain Salah, which long had been one of the great commercial points on the caravan routes between Timbuktu and the Mediterranean, and whose great walls were formerly necessary on account of possible raids by desert tribes.

The heat of the Sahara is not surpassed anywhere on the globe, the temperature rising often in the summer season to 133 degrees. The radiation of this intense heat is most rapid, the temperature frequently falling from 100° during the day to below freezing point at night. To the disintegration of the soil caused by these extreme changes is ascribed the fact that since comparatively recent geological times the general height of the desert above sea-level has been greatly lessened.

Algeria. The region of North Africa governed directly by the French has an area of about 377,000 square miles, of which 184,474 square miles is properly called Algeria and about 193,000 square miles is Sahara region, governed from the Algerian capital. The local governments of the country are of three sorts, namely, civil communes with self-government like the communes of France, mixed communes administered by appointive civil officials, and military territory governed by army officers. Over all these extends the authority of the French Governor-General located at Algiers, who is appointed from Paris. The Governor-General has very full administrative powers. There is no colonial legislative body, properly speaking, but there is a Superior Council whose advice the executive may ask. An army corps is maintained in colonial service to protect the frontiers and to police the military territory. Algeria proper is divided into the three departments of Algiers, Oran, and Constantine, each of which sends a Senator and two Deputies to the National Assembly at Paris. The Sahara region is organized as far south as the oases of Ain Salah and Twat, about 320 miles from the Mediterranean. The whole Sahara interior, though yet unoccupied by the French, is conceded to be within the French sphere of influence.

A DESERT SCOUT

Merchants of the Sahara caravans are of necessity warriors as well, on occasion. As in many other frontier regions the rifle is the most potent argument against aggression and the desert scout is an important adjunct of commerce.

TYPICAL STREET IN TUNIS

French influence, though visible enough in Tunis, has not changed the Arab quarter, whose streets show little change from the olden time, except, perhaps, in a closer approach toward cleanliness. They are built with little width, resembling much the alleys of an American city. Down the center runs a gutter which embodies the oriental idea of sanitation. Shuttered or barred windows protect property against intruders.

The people of Algeria are Berbers and Arabs, with a large number of French colonists and a sprinkling of other nationalities. The prevailing religion is Mohammedan, but the French element is Roman Catholic. The government makes an annual grant divided proportionally among the clergymen of the different faiths. There is a system of schools so organized as to provide for the separate interests of Arabs and Europeans.

Resources of Algeria. When the French entered the country it was regarded as uninhabitable for Europeans; but they have not only ameliorated the sanitary conditions by drainage and by the cultivation of the Eucalyptus, but have also advanced agricultural prosperity by driving wells, extending irrigation, and reclaiming marshland. Agriculture is the mainstay of the inhabitants. The principal crops are wheat and barley, and market gardening is increasing in importance. Large quantities of tobacco are grown. Extensive vineyards show an expanding wine production, and olive groves are being established. On the oases of the Sahara are millions of date-palms. Figs, oranges, mandarines, and lemons are important fruits. Among the most valuable resources of the colony are the esparto grasses, including the alfa, which grow wild on the southern slopes of the Oran uplands and are employed in domestic manufactures and exported for use in paper-making. Thousands of tons of cork are cut annually from the forests, which have an area of about 7,000,000 acres.

Next to agriculture as a source of colonial wealth ranks the working of the mines. Zinc and iron are the only metals that are found in very large quantities, but lead, silver, and copper also figure in the mineral output. Phosphate beds are worked for export. Petroleum is found in Oran, and there are famous marble quarries. The other principal industries are the making of pottery and esparto goods, weaving, shipbuilding, and leather dressing. Internal communication has been facilitated by the building and improvement of national highways and railways connecting the coast towns with those of Tunis and the interior. The chief exports are zinc, iron, alfa, phosphate, cork, hides, fiber, and tobacco. The trade of Algeria is chiefly with France, but Great Britain and Belgium buy heavily of Algerian products and the trade with Morocco is large.

The principal cities of Algeria are Algiers, the capital, which is also important commercially, being the chief coaling port of the Mediterranean; Oran, a fortified seaport with a fine harbor; Constantine, a natural fortress, seat of a garrison, and source of leather manufactures; and Bona, near large iron mines.

THE LION STAIRCASE, BEY'S PALACE, TUNIS

A little distance outside the city of Tunis is The Bardo, one of the palaces of the Bey, famous as one of the most artistic examples of Tunisian architecture. From an inner courtyard the famous Lion Staircase leads up to the audience-hall of the ruler. Here, before the French conquest, the ambassadors of foreign nations were received in state by the Tunisian sovereign.

The more important of the smaller cities are Tlemsen, center of a fruit district; Maskara, an important trading point; Biskra, one of the favorite health resorts, and Sibi-bel-abbes, a fortified military post.

ARAB CAMP NEAR TUNIS

The primitive sort of life followed by the nomads of the East for centuries is still the lot of the Arab tribes of North Africa. Pitching their sackcloth tents near some spring of running water they spend days lazily watching their small flocks or making visits to near-by villages.

French Influence in the Sahara. The arid and uncultivated wastes of the Sahara are as yet without economic value, yet France has steadily sought to bring them under its political control because of the important routes of trade that cross the desert from the Sudân to the ports of the Mediterranean. The towns of Tripoli have been in former years the favored outlets for the caravan commerce, but French enterprise gradually is diverting much of the trade to the Algerian cities. Political control is essential to the maintenance of commercial control, and year by year the French have steadily pushed their measures for securing power. Into the unknown regions of the interior daring explorers, aided in their work by the French government, have forced their way, mapping out the country and noting the location of the native tribes. Behind the explorers the frontier has gradually advanced, new military posts being established in the oases, while the minor chieftains are placated with diplomacy or crushed by force. Unless unforeseen events occur the subjection of the desert to military rule will be accomplished within a very few years and Algeria will be made the outlet for a large part of the products of the Sudân. Projects are already made for the railroad that will connect Algeria with the interior of Africa.

Tunis. The protected State of Tunis lies east of Algeria and is bounded on the south by the Turkish dependency of Tripoli. The northern part is a mountainous plateau, well watered by numerous streams and rising into highlands covered with dense forests. On the more northern coast the plateau reaches the sea with abrupt cliffs. Just south of the plateau region are the great salt marshes and a district in which hot springs occur. The southern half of Tunis is desert country, which, reaching to the coast, forms sandy beaches. Its area

MOORS AND TAME LIONESS

The picturesquely garbed people of the Great Desert who drift into the walled cities are a never-failing source of interest in Morocco. Wild creatures themselves, these tribesmen live close to the heart of nature and their familiarity with the denizens of the deserts is shown by the strange pets that they acquire.

SCENE ON THE QUAY AT TANGIER, MOROCCO

The chief seaport of Morocco, thanks to its splendid harbor, sheltered from the west winds, enjoys extensive trade and its broad quays are always busy with the movement of commerce. In many sections new buildings have been erected in the European style, but nowhere has the Oriental aspect of the city been completely done away with and Tangier remains one of the most charming of the cities that mark the boundary between Oriental and Occidental civilizations.

is about 51,000 square miles. The government is nominally under the direction of the hereditary Bey, whose family has been upon the throne since 1691. In reality the chief executive is the French Resident-General, who is appointed from Paris, and who is assisted by nine local heads of departments, seven of whom are French. There is also a French army of occupation.

The population is chiefly Arabs and Kabyles, both being Mohammedan peoples. Besides these there is a large element of Jews and a smaller element of Europeans, chiefly Italians and French. All religions are tolerated in the State since it has been under French rule. There are many schools, some being aided by public grants. Agriculture is the chief industry; wheat, barley, and oats are the leading cereals. Next to this in importance is fruit-growing, olives, dates, oranges, lemons, and grape-fruit being raised in large quantities. There are extensive vineyards. Among forest products are cork and almonds. From the coast fisheries, conducted chiefly by Italians, are derived sardines, anchovies, and sponges. The mineral resources are much like those of Algeria. Lead and zinc are the chief metals. Salt, phosphate, gypsum, and marble are also found. Native industries are wool and carpet weaving and leather-work. The chief exports are cereals, animal products, olive oil, alfa, lead, zinc, sponges, and fish. The only large city is Tunis, the capital, which is easily accessible to ocean vessels and has railroad connection with Algiers, besides being the terminus of caravan trade from the interior.

SULTAN OF MOROCCO

Mulai-Abd-el-Aziz, Prince of True Believers, has ruled a restive kingdom since 1894. He is a lineal descendant of the uncle of Mohammed, and thus has a special claim to the veneration of his people.

Morocco, State and People. The area of the independent State of Morocco is estimated at 219,000 square miles. Twat and other oases, formerly under Moorish suzerainty, have been occupied by the French. Fully three-fourths of the population of the Atlas lands are Berbers, but since the beginning of the present era they have become assimilated in language, in religion, and in usages to the Semitic Arabs who have swept into the country. The Berber is more domestic than the Arab, less quarrelsome, less fanatical, and less trammeled by the precepts of the Koran, although Mohammedanism is his religion. The Arabs, however, and notably the descendants of the Andalusian Moors that were expelled from Spain, are the dominant political factor in North Africa west of the Egyptian Sudân. Domestic life among both races is patriarchal, and only in limited portions of the north has the tribal organization been abandoned. Education in Morocco consists solely in learning to read from the Koran. There are in the sultanate about 100,000 Jews and perhaps twice as many negroes, the latter being Mohammedans.

The government of Morocco is an absolute despotism, at the head of which stands the Sultan, a lineal descendant of Ali, the uncle and son-in-law of Mohammed. The Sultan has three capitals, Fez and Mekines, the northern seats of administration, and Marakesh (Morocco), the southern capital. His troops are quartered at the capital where he may happen to reside. The diplomatic representatives of the powers are compelled to reside at Tangier. The grandfather of the present Sultan was almost a full-blooded negro, but he belonged to the privileged class who claim descent from the Prophet. The hill tribes of Morocco, notably those of the northern coast, are in a state of chronic revolt against the authority of the Sultan, and authority rests lightly upon the tribes south of the High Atlas.

MOORISH GATEWAY

Resources of Morocco. Agriculture is the leading industry of Morocco, barley, wheat, hemp, flax, pulse, potatoes, tobacco, maize, and fruits being the principal products. The chief manufacturing industries are weaving, dyeing, and metal-working, the making of pottery, wickerwork, leather goods, cloth, and soap, and the burning of lime. Stock-raising is carried on extensively.

The mineral resources of Morocco, although undoubtedly rich, are little worked and comparatively unknown. Coal has not yet been discovered in paying quantities, but it is certain that there is gold as well as copper in the valley of the Wadi Sus, antimony in the southern Atlas ridges, iron throughout the western ranges, and silver along the Wadi Nun. Practically the only mineral resources worked in Morocco are the deposits of rock-salt and the brine lakes, the product of which is exported to Central Africa.

The principal trade of the sultanate is with Great Britain, France, Germany, and Spain, in the order named. The four chief ports in point of value of trade are Tangier, Casa Blanca, Mazagan-el-Brija, and Mogador. Eggs, almonds, chick peas, goat skins, beans, linseed, and cattle are exported. Tangier, being the only place in Morocco where Christian and Jew are secure from attacks prompted by fanaticism or greed, has become, by reason of its rare climate, a favorite winter resort for Europeans.

Spanish Possessions. At several points on the north coast of Morocco are small areas belonging to Spain and used as military or convict stations. The chief of these is Ceuta, located on a small peninsula opposite Gibraltar and sharing with the latter the strategic command of the Mediterranean entrance. It is administered as part of the province of Cadiz. The town of Melilla and the islets of Alhucemas, Peñon de Velez, and the Zaffarines are situated at intervals along the coast. On the western coast of Morocco, about latitude 29° 30′, the Spanish also possess the district of Santa Cruz de Mar Pequeña, ceded by name in 1860 and located by a convention of 1900. This district, called also Ifni, is a fishing station. Off the western coast of Morocco are the Canary Islands, possessions of Spain, which belong geographically to Africa but politically are integral parts of the Spanish realm.

Historical. The three Barbary States under consideration had practically a common history for eighteen centuries. The Roman conquest of Carthage made Tunis a Roman province. West Algeria and Morocco kept a nominal autonomy until A. D. 42, when they also were incorporated in the Roman Empire. Prosperity and progress for the Roman possessions in Africa ended when the Vandals overran the lands. The conquest by Belisarius (533) linked the fortunes of North Africa for 114 years to those of the Byzantine Empire. The result was disastrous; oppressive taxation inspired revolt, and the strife that followed destroyed the population and laid the region desolate. Thus the country was prepared for the Arab incursions of 647-709, whereby the Saracens successively extended their rule over North Africa. The Moslem power in Algeria and Tunis continued until 1830; in Morocco it is still unbroken. There have been changes in the location of the capital — from Tangier to Fez, from Fez to Ujda, from Ujda to Fez and Marakesh (Morocco) — accompanied with changes of dynasty, but the jealousy of England, France, and Spain thus far has prevented either the absorption or the dismemberment of the territory. Out of a large number of warring Berber and Arab States, Tunis and Algiers rose to preëminence, acknowledging the suzerainty of Turkey. They became piratical powers to whom the European nations paid tribute for several centuries, until the American Decatur forced a change of policy on the part of the corsair States. Following the American example of resisting exactions, France occupied Algeria in 1830 and the Deys who governed the country were dethroned. Led by Abd-el-Kader the Algerians long resisted French rule, but in 1847 were finally subdued. Tunis was occupied by French troops in 1881, and lost all real independence.

EGYPT AND TRIPOLI

EGYPT proper lies between the Mediterranean Sea and the parallel of 22° N. It is bounded on the east by the Wadi el Arish in Syria, and the Red Sea, and includes a number of oases in the Libyan Desert, lying as far westward as the meridian of 25° E. The total area of the territory is estimated at 400,000 square miles, of which only 12,976 square miles is settled and cultivated. From Cairo northward the Egyptian territory is known as Bahari or Lower Egypt, while the greater district south of Gizeh is known as Saïd or Upper Egypt. The greatest density of population, outside of the governorship of Cairo, is found in the Syrian district of El Arish, where 16,991 persons inhabit a space of 128 acres; but all along the Nile, in both Lower and Upper Egypt, are provinces with more than 1,000 inhabitants to the square mile, none having less than one-half that density. The average density of the cultivated portion of Egypt proper is about 900 to the square mile. Egypt and the Sudân together have an extreme length, from north to south, of about 1,600 miles and a maximum breadth, on the Tropic of Cancer, where they include Sahara region, of about 1,300 miles.

KHEDIVE OF EGYPT

Abbas Hilmi was a young student at Vienna when called to the throne by the sudden death of his father in 1892. He is the seventh of the dynasty of Mohammed Ali, and is well liked by his people.

The Desert. The desert through which the Nile River flows is continuous throughout Egypt proper and extends well into the Sudân. Between the Nile River and the Red Sea in Egypt proper is the Arabian Desert, which merges into the Nubian Desert at the south. These steppe lands are traversed by innumerable wadies, which mark the course of drainage when there is any precipitation to be drained, while between the Atbara River and the Isthmus of Suez they are broken by high hills, among which are mountains with elevations of from 5,000 to 7,000 feet above sea-level. In the northern part of Nubia, between the escarpment of Abyssinia and the latitude of Ras (Cape) Elba, these mountains are disposed without any semblance of regularity; beyond that point they assume the form of a range extending along the Red Sea coast. It is at the apex of the angle in the Sinai Peninsula formed by the converging ranges bordering on the two branches of the Red Sea that the mountains of Egypt attain their greatest elevation, more than 8,500 feet above the sea. The region between the Nile River and the Red Sea, which in former ages enjoyed an abundant rainfall, now is arid in the extreme, and the wadies often are dry continuously for years. West of the Nile River lie the Libyan and Bayuda deserts, which are less broken by elevations than the eastern steppes, but, like the latter, are traversed by many wadies and dotted here and there with oases. All of these deserts are, physically, portions of one great arid belt, over the surface of which the Nile has plowed its way, carrying an exotic fertility far into the heart of the sandy wilderness.

CEMETERY AT ALEXANDRIA

Outside the gate of Pompey's Column lies the Arabic cemetery. Among the many tombstones inscribed with curious Arabic characters rise the columns of an ancient ruin that is believed to have been used as a temple under the Roman rule.

The Nile River System. The southernmost head stream of the Nile water system is the Simiu River, lying at an elevation of about 4,000 feet, in German East Africa. Traversing the Victoria Nyanza, the great reservoir of the Central African Plateau, the Nile River, under the name of the Bahr-el-Jebel, flows across British East Africa, gathering volume from tributaries in the region of equatorial rainfall and descending from the inland plateau 2,800 feet within a distance of about 1,000 miles.

Entering the Egyptian Sudân, the great river becomes the Bahr-el-Abiad or White Nile. Thus far the chief tributaries have been received from the west, the most important being the streams and streamlets of the Bahr-el-Ghazal system, which drain the north-eastern slope of the water-parting between the Nile and Congo rivers. Thereafter the noteworthy tributaries reach the Nile from the east, all except the Sobat River having their sources in the Abyssinian Plateau. Even without these eastern tributaries the Nile would be a perennial stream, making its way slowly through the desert at about its present low-water level; but there would be no annual flood to provide periodical irrigation, and little or no alluvium in suspension to give fertility to Lower Egypt. The soil of the equatorial plateau, held together by a tropical tangle of vegetation, yields little to erosion, while the lower reaches of the Bahr-el-Abiad are only slightly swollen in the tropical rainy season because of the masses of floating

THE LIGHTHOUSE OF ALEXANDRIA HARBOR

The Pharos, built by Ptolemy II in 282 B. C., endured until the 14th century and was accounted one of the wonders of the world. On its site, in the 15th century, Sultan Kait Bey built another lighthouse which was destroyed in 1882 by the British bombardment. A modern structure now marks the harbor entrance and guides commerce to the ancient port as of old.

vegetation or "sudd," which partly dam the stream south of Khartum and which have been known to impede navigation for long periods. A great part of the immense volume of water thus spread out in temporary lakes is lost by evaporation and by absorption in the spongy soil.

What the Nile loses through evaporation, infiltration, and the demands of irrigation, in its course from Victoria Nyanza to the Mediterranean Sea, is compensated apparently by deep springs of water beneath its bed, so that without the Ethiopian streams the river would preserve its level throughout the year, but Egypt would in large measure lack its alluvial soil. On the other hand, without the White Nile, the river would be a mere wadi, formed by the junction of the intermittent Blue Nile and the Black Nile.

The two eastern tributaries to which the Nile owes its flood height in summer and fall are the Bahr-el-Azrek or Blue Nile and the Atbara or Black Nile. Around and between these streams, in a region still within the zone of rains, is found the only fertile tract, outside of the Nile Valley itself, in the whole of Nubia. Here in the regions of Taka and Sennar occurs a broad expanse of well-watered and cultivable land, warmed by the tropical sun, that bears some resemblance to the fertile expanse of the Delta north of Cairo. From the mouth of the Atbara River to the Mediterranean Sea lies the narrow alluvial belt of the Nile Valley, which winds in the form of a great letter S between Khartum and Korosko.

MINARET OF EL-AZHAR

VIEW OVERLOOKING CAIRO FROM THE EAST

In the bright glare of noonday the view over the city is singularly monotonous, but in the evening, when the hues of sunset are cast upon the domes and minarets, and the eye sees away beyond the myriad roofs the brown waste of desert sand backed by the faintly outlined shapes of the far distant pyramids, then there is a harmony of subdued color effects and Cairo is beautiful.

The Delta. Below Cairo the Nile reaches the Mediterranean Sea by two main branches, the Damietta to the east and the Rosetta to the west, traversing the famous Delta. The absence of cliffs such as confined the stream in its flow across the desert here makes possible the watering of a broad expanse of territory. The volume of flow past Cairo at low water is about 15,000 cubic feet a second; at high water, about 470,000 cubic feet. About one-twelfth of this volume, flowing over the barrage or dam below Cairo, is distributed over the Delta by means of the Menufie Canal and its ramifications. Innumerable canals also tap the Rosetta branch, but the Damietta branch flows at too low a level to be equally available for purposes of irrigation. As the greater part of the Nile alluvium is lost on the way to the sea, the encroachment of the Delta on the Mediterranean is exceedingly slow, not exceeding eight or nine feet a year.

The regular rise of the River Nile begins annually about the middle of June and continues until October, when, on the Egyptian frontier, it reaches a high-water mark of fifty-four to fifty-five feet above its lowest level, and at Cairo one of from twenty-five to twenty-six feet. A rise of less than twenty feet is considered inadequate for a good harvest. The low-water level is reached about the end of May. Contrary to the general impression, the Nile lands, in seasons of inundation, are not one vast flooded area. The basin method of irrigation, which implies entire inundation, is generally followed in the Upper Nile districts, but in the Delta the flood waters are distributed through the arable lands by means of canals and ditches, many of which are dry except in late summer and fall. Here irrigation and fertilization by salts held in solution are effected by slow infiltration through the retaining dikes and under the surface of the soil.

Irrigation System. Along the Upper Nile innumerable irrigation canals and ditches have been dug. Whether the Bahr Yusuf, which for 300 miles, from Sohag to Beni Suef, pursues a course parallel to the main river and between it and the Libyan escarpment, be regarded as an artificial canal or as a natural irrigation channel, its existence, as a source of water-supply supplementary to the Nile, is equally a cause for wonder. In the Beni Suef district this channel is divided, the right branch continuing on toward the head of the Delta, the left passing through a gap in the Libyan escarpment into the Fayum depression, a basin thirty miles in diameter. Here 3,000 years before the Christian era the rulers of Egypt spent one or two centuries in forming the largest artificial reservoir ever constructed, Lake Moeris, of which all that now remains is the brackish Birket-el-Kerun, at the northwest. Branches of the Bahr Yusuf ramify throughout the Fayum depression, which for centuries has been a veritable garden.

During the British occupation immense reservoirs for the regulation of the Nile's flow, the prevention of disastrous floods, and the storage of a surplus of moisture against the season of low water have been provided by the construction of dams at Assuan and Siut. The Assuan dam, completed in 1903, creates a reservoir 144 miles long and 1¼ miles wide, capable of holding 1,000 million tons of water. It is estimated that the extension of irrigation thus made possible will bring under cultivation 600,000 acres of land now barren. The cost of the two dams is estimated at about $10,000,000, and the construction of subsidiary canals and ditches, it is expected, will result in largely strengthening Egypt's hold upon the corn and cotton markets of the world.

STREET IN CAIRO

The homes and shops of the Mohammedan population lie in the "Old Quarter" of Cairo, the streets forming a dense network. Narrow and crooked enough to be distinctively oriental, these avenues are in interesting contrast with the newer quarters of the city.

Climate, Flora, and Fauna. In Egypt proper the climate is generally hot and dry; the mean annual temperature lies between 72° at Cairo and 78° or 80° near the First Cataract. The extremes recorded at Cairo are about 35° and 100° and at Luxor, 41° and 113°. The air of the desert region is extremely dry, scarcely any dew being formed. A practically rainless area extends from the latitude of Cairo to about 21° N. on the right bank

of the Nile, and much farther south on the left. The Delta receives a slight rainfall by reason of the proximity of the sea and of the Sinai Mountains and the Red Sea coastal range. The Sinai Peninsula is occasionally visited by severe thunder-storms, with torrential rainfall, and here a temperature as low as 17° has been recorded. The pre-

CALIPHS' TOMBS

East of Cairo lies the necropolis of the sultans of the 13th and 14th centuries. It is largely in ruins, very few of the beautiful tomb-mosques surviving. Those of Sultan El-Ashraf and Emir Yusuf keep their forms.

vailing winds throughout Northern Egypt for the greater part of the year are from the north, a circumstance that serves to some extent to temper the extreme heat; but in February the winds shift and until June blow from the southeast and southwest. The khamsin, a sand-laden wind that blows from the desert over the Nile Valley during these months, is a source of dread to the inhabitants.

Because of the absence in Egypt of any well-watered but unoccupied districts there is neither flora nor fauna of characteristic variety or notable frequency. The only wild growths of plant life are the aquatic plants along the Nile banks and the thorny and scrubby vegetation of the almost uninhabited steppe. The larger wild animals can only be found in the more southern parts of the Nubian wilderness, and then in but small numbers. In Egypt there remain merely the large-eared fennec, the long-legged jerboa or jumping mouse, and some varieties of venomous serpents, including the deadly hooded snake.

ALABASTER MOSQUE

The twin spires of the "Alabaster Mosque," where lies the body of Mohammed Ali, founder of the present Egyptian dynasty, are landmarks in the Egyptian capital.

People and Resources. The Copts, who are the purest surviving remnant of that Caucasian race from Asia which was apparently the first to settle Egypt, now number about 600,000. They form an exclusive community, seldom intermarrying with the Moslems about them, supporting their own schools, maintaining their language and Christian faith, and making their homes for the most part in the large towns. The fellahs, or peasant dwellers along the Nile, are also considered to be the direct descendants of the ancient Egyptian peasants, but they profess the faith of Islam. They number about 2,000,000. The remainder of the Egyptian population is a mixture of Arabs, both Bedouins and town-dwellers, Turks and Levantines, Berbers and Negroes, Armenians, Jews, and Europeans. The Moslems far outnumber the professors of any other faith. The sedentary Egyptian population is mostly illiterate. There are a number of schools, aided by the government, nearly seven-eighths of which are elementary. The Mosque of El-Azhar at Cairo is practically a Mohammedan university.

The mineral resources of Egypt and the Sudân as yet make no showing in the commerce of the country. For centuries gold has been found in the district of the Elba Hills. Silver, too, occurs, and sulphur is found in the Jimseh Peninsula, petroleum in the Jebel Zeit, topazes in the Wadi Khashab, emeralds in the Wadi Sikait, and salt and alum in the Natron Valley. Native copper is abundant in Dar Fur, and along the Nile are found rich deposits of the beautiful building stone that has been utilized since the days of the early Pharaohs.

Industries. Of the native inhabitants four-fifths are engaged in agriculture and one-fifth in other industries and trades. Of the total area under cultivation nearly three-fourths belong to the State, being held in life tenancy by peasant proprietors, who pay a tax or rental, besides irrigation dues. A large proportion of the fellahs, or agricultural population, are small landholders, cultivating about fifty acres each; the remainder are hired laborers. The lack of rainfall, together with the enforced dependence on irrigation and the warmth of the climate, give the Egyptian farmers three crop seasons. Cereal produce, legumes, and flax are sown in November or December, after the subsidence of the Nile, and are harvested in May or June; cotton, sugar-cane, and rice, sown in March, April, or May, are harvested in October or November; while rice, sorghum, and vegetables, usually sown in July, are gathered in November or December. In Upper Egypt, where the irrigation is by submersion at time of high water in the Nile, cereals and vegetables are raised. In Lower Egypt, where the network of canals gives perennial irrigation, two and in some years three crops may be grown, the principal products being cotton, sugar-cane, rice, maize, wheat, barley, clover, and cucumbers. The greatest crop acreage in Egypt is that of maize, with wheat next. The cotton raised in Egypt is of exceptionally long fiber, and this crop is the most important produced for export. Other products exported are wheat, beans, sugar, maize, rice, skins, and ivory.

TOMBS OF THE MAMELUKES

From the 13th to the 18th century Egypt was ruled by a succession of military despots whose stepping stone to power was usually the command of the small force of 'mamluks,' or armed slaves maintained at the capital to keep the people in subjection. The "Tombs of the Mamelukes" on the southern edge of Cairo are a group of sepulchers erected by some of the wealthier of these slave-kings, but now in ruins.

The Suez Canal. The isthmus canal was a severe blow to the commercial importance of Alexandria, which for centuries had enjoyed the profits of the overland trade between Europe and the East Indies. This great ship-canal in no sense supplies the lack, in the economical equipment of Egypt, of a river navigable for deep-draft vessels, but it is justly regarded as the most important artificial waterway in the world, both because of the intrinsic magnitude of the undertaking and on account of the diversity of the international interests that it serves. The successful project is hardly half a century old, but the idea of water communication between the Mediterranean and Red seas dates at least from the nineteenth dynasty, 3,000 years ago, when, in the reign of Seti I, a great canal was built from the Nile River through the land of Goshen and probably to the Gulf of Suez. This canal through neglect became obliterated and a new waterway, along a similar course, was begun 800 years later by Pharaoh Necho, being probably completed under the rule of Darius the Persian. One or the other of these canals is said to have been restored by the Romans and again by the Arabs after the Saracen conquest.

SUEZ CANAL AT PORT SAID

The city at the Mediterranean entrance of the great canal was named in honor of Saïd Pasha, the khedive who ruled when the canal was begun. It has been called "The coaling station of the world" because a million tons are annually supplied to passing vessels of all nations. The city is built upon a sand bar. Its broad streets and neat homes show that its origin was due to Europeans rather than to the people of the Orient.

MEDINET-EL-FAYUM

The capital town of the fertile region called the Fayum, located on an artificially made stream of ancient origin, is the center of a cotton and grain region and has several modern mills for manufacturing the cotton produce of the district.

The scheme for a canal across the Isthmus of Suez was repeatedly revived, notably by Napoleon Bonaparte; but it was left to Ferdinand de Lesseps to interest a viceroy of Egypt, to enlist sufficient capital in France, and to carry the enterprise to completion. The canal was begun in 1859 and opened for traffic ten years later. The total cost was about $100,000,000, defrayed by a joint stock company. Great Britain in 1875 acquired by purchase 176,600 khedival shares and so became the largest single shareholder. By a convention signed in 1888 the neutrality of the Suez Canal and of the subsidiary fresh-water canal, from Cairo to Ismailia and Suez, was declared inviolable. The total length of the waterway is eighty-seven miles, of which sixty-six miles represent actual cutting and the remainder the dredged and natural channels through Menzaleh, Ballah, Timsah, and Bitter lakes. In 1895 the increase of traffic compelled the widening and deepening of the channel, which is now 420 feet wide at the surface, 108 feet wide at the bottom, and thirty-one feet deep throughout. By means of electric lights and luminous buoys the use of the canal by night is rendered possible, about twenty hours being required for the passage. The canal is chiefly valuable in the India, China, and Australia trade, saving 5,500 miles in the voyage between London and Bombay and 4,100 miles between London and Hong-kong Sailing vessels, however, and steamers trading with New Zealand, find it more economical to save tolls by making the longer voyage around the Cape of Good Hope and returning by way of Cape Horn.

RUINS OF KARNAK

The lotus columns are interesting features of the gigantic ruins at the Great Temple of Karnak, the central shrine of ancient Egypt. Amid enormous fragments of fallen walls and stately pylons of classic beauty, they tower aloft like great monoliths.

Cities and Monuments. Alexandria, the commercial center of Egypt, situated at the western extremity of the Nile Delta on a narrow isthmus, contains a palace of the Pasha, a custom-house, naval arsenal, and a military and naval hospital. The city has important scientific institutions, but there remain few relics of its former splendor under the rule of the Ptolemies and of Rome. Cairo is interesting from an architectural point of view, being built after the Saracenic style. It is the seat of the great Mosque of El-Azhar, the oldest Mohammedan university. At Gizeh, a suburb, is an incomparable museum of Egyptian antiquities.

Siut is chiefly important for the Nile dam in its vicinity and as the administrative capital of Upper Egypt. Assuan, on the Sudân frontier, has a considerable trade from the fact that it is located near the First Cataract and consequently at the head of free navigation from Alexandria. Suez, the Red Sea terminus of the Suez Canal, is an unprogressive little Arab town, but Port Said, at the Mediterranean extremity of the great waterway, is a large and busy city.

About six miles west of Cairo are the three great pyramids, or tombs of the ancient kings.

The oldest of these colossal monuments antedates the Christian era by thirty centuries; the largest, the Great Pyramid of Cheops, covers with its base about thirteen acres of ground and rises to a height of 483 feet. Near this pyramid is the Sphinx, representing a human head on the body of a recumbent lion, carved from stone and with a height of sixty-six feet from base to crown. This ancient work is now going rapidly to decay. Along the route from Cairo to Medinet-el-Fayum numerous monuments, mostly pyramidal, are found at various points on the left bank of the Nile.

Ancient History. Egypt rivals China in its antiquity, having a civilization already far advanced at the dawn of history in other lands. Its chronology, however, is incomplete, being pieced together from fragmentary records. The list of the Egyptian kings compiled by the priest Manetho has been preserved, and has been supplemented by data from the monuments. Menes, the first recorded ruler of Egypt, lived apparently about the year 4000 B. C. Teni, the capital of King Menes, near Abydos, was superseded eventually as the royal city by Memphis, which the same monarch founded near the site of modern Cairo. Under subsequent dynasties and dominations the seat of government was frequently changed. It was in the fourth dynasty, more than thirty centuries before Christ, that the three great pyramids of Gizeh were built, under the rule of Cheops or Khufu, Khafra, and Menkaura. Centuries afterward an immigration of Semitic tribes overthrew the native kings and placed on the throne the Hyksos monarchs or "Shepherd Kings." Their rule, through two dynasties, continued until about twenty-one centuries before the Christian era and is supposed to have been the period in which the Joseph of the Hebrew Scriptures rose to authority. When the Hyksos were expelled the Hebrew exodus probably took place. Under Seti I and his successors of the nineteenth dynasty, Egypt reached the height of its development, but decadence followed, and in the 8th century before Christ the land fell temporarily into the hands of the Assyrians.

EGYPTIAN ARTILLERY OFFICER

After the revolt of Arabi Bey in 1882 the Egyptian army was reorganized under British control. It is now an efficient fighting force with an excellent corps of native Egyptian officers. The artillery arm has about 150 cannon, including both fortress and field batteries.

The twenty-sixth dynasty, the last of the native Egyptian line of kings, was succeeded 525 B. C. by the Persian domination, which prevailed against all attempts to reëstablish the native dynasties, but finally collapsed before the conquering force of Alexander the Great. On Alexander's death (323 B. C.) one of his generals inaugurated the rule of the Ptolemies, which introduced Greek culture into Egypt and to which, in 42 B. C., Roman supremacy succeeded. On the partition of the Roman Empire Egypt fell to the Byzantine emperors. In 638 the Saracenic commander, Amr-Ben-el-Asi, conquered Egypt. The Arab Mohammedan régime came to an end in 1517, when Tuman Bey, the last independent Sultan, was dethroned and Egypt was made a Turkish pashalic. In 1798 Napoleon possessed himself of the country, but the French were compelled to evacuate the region, and Turkish authority was restored.

NATIVE OF NUBIA

The Nubians belong to the great group of negro races, showing their kinship to the interior tribes by their very dark skin and shape of head. They are an intelligent and industrious people, but very poor in their native districts. Many find their way to Lower Egypt and work as laborers.

Modern History. In 1811 Mohammed Ali, the Turkish viceroy, secured absolute control of Egypt and transmitted power to his children. Said Pasha, his son, allowed European influence to enter Egypt through financial arrangements for the Suez Canal. In 1866 the office of Viceroy was made hereditary, with the title of Khedive, for Ismail Pasha, Said's successor, who plunged Egypt so deeply in debt that in 1879, on the demand of the great powers, he was deposed. France and Great Britain now established Controllers-General of their own in Egypt, who interfered with the Khedive's government. As a result Arabi Bey, Minister of War to Ismail's successor, Mohammed Tewfik, headed a military revolt that had for its purpose the establishment of a constitutional régime and the diminution of European influence in Egyptian affairs. France declined to interfere with the new movement, but Great Britain intervened with force. Alexandria was bombarded, Egypt occupied, and Arabi taken prisoner. Under British pressure the Khedive by decree, in 1883, abolished the dual control, and British influence has been paramount ever since, represented by a financial adviser to the Khedive. The Egyptian army, finances, and judiciary have been reorganized by English officials, and the irrigation system has been perfected. The Mahdist revolt, which for about fourteen years practically closed the Egyptian Sudân, has been quelled with the capture of Omdurman in 1898 and the slaying of the Khalifa Abdullahi a year later, after the defeat and dispersion of his forces.

Government. The native ministers of state who carry on the administration of Egypt are responsible to the Khedive. All laws are submitted for examination to a Legislative Council of thirty members, fifteen of whom must be residents of Cairo; and without the consent of the General Assembly, summoned every two years, no direct personal or land tax may be levied. The British financial adviser must concur in all enactments affecting public revenue. While the financial adviser has a right to a seat in the Council of Ministers, he is not an executive officer. A British military force is maintained in Egypt as a nucleus for the army organization and as a support to the prestige of English officials.

THE KIOSK AT PHILAE

Near the ruins of the great Temple of Isis on the Island of Philae is a small pavilion begun in the 2d century by order of the Roman Emperor Trajan, but not completed. It is an unusually well-preserved and artistic example of Roman temple architecture.

ANGLO-EGYPTIAN SUDÂN

The parallel of 22° N. has been chosen as the boundary, for administrative purposes, between Egypt and the Anglo-Egyptian Sudân, the latter including, in its 950,000 square miles of area, the greater part of old Nubia and the broad expanse of Dar Fur to the west. The population here, before the Mahdist revolt of 1882, was probably 10,000,000, but during the sixteen years that passed before the Sudân was reconquered the region was terribly depopulated. On the south the Sudân territory merges into British East Africa; on the west it is separated from the French sphere by an irregular line, delimited after the Anglo-French treaty of 1899 and mainly following the Nile and Congo watershed.

The region of the Sudân falls within the zone of tropical rains. In equatorial latitudes the Sudân has a rainy season continuing ten months, with more or less precipitation in the remaining two months of the year; while in 8° N. lat. it has a rainy season lasting from March to April and another from the middle of May to October, with two dry seasons intervening. The dense tropical vegetation of the Sudân is what might be expected from so abundant a rainfall. In the Upper Sudân the tropical fauna includes the ostrich, guinea-fowl, stork, and ibis, and brilliant-hued wading birds, such as the flamingo and pelican; among beasts of prey, the lion, black panther, spotted leopard, hyena, and jackal; and among larger mammals, the elephant, hippopotamus, rhinoceros, zebra, giraffe, hyrax, antelope, buffalo, and chimpanzee. All large carnivora are rare except the crocodile, hyena, and jackal.

Government. The Sudân now is under a Governor-General, appointed by the Khedive with the consent of Great Britain, and under an agreement of 1899 the British and Egyptian flags are used together. Khartum is the capital. For administrative purposes the region is divided into eleven provinces, each under a British officer bearing an Egyptian commission. There is no legislative body, laws being made by proclamation. The region has a rich soil along the rivers and will probably be a good agricultural country in the future. In the southern portion are vast forests like those in other regions of Equatorial Africa, capable of rubber and gum production.

At Khartum is the terminus of a railroad which follows the course of the Nile from Cairo southward and which will form part of the projected continental system extending from the Cape of Good Hope to Cairo. Within a few years, according to present plans, the Egyptian road will be extended from Khartum to Kassala and then southward as far as Lake Rudolf or Lake Albert, to one of which lakes the southern portion of the Cape to Cairo system will by that time have been extended from the present termini in Rhodesia.

People. The native races of the Anglo-Egyptian Sudân are of distinct stocks. Between the River Nile and the Red Sea are the Beja or Bishari nomads, an ancient people of Hamitic descent whose tribes are pastoral. In the Nile valley are the Nubians, a mixed race, originally negro but with admixture of Hamitic and Caucasian elements. In the Sudân proper and on the upper streams of the Nile are various negro races, devoted to agriculture and stock-raising. All through the region is a large element of Arabic blood introduced during the Egyptian rule. The people of the interior are little known.

FELLAH GIRL

The women of the laboring classes in Egypt wear a long cotton or muslin veil that can conceal the face when desired. Bright-colored robes and cheap necklaces of brass or plated gold add to their picturesque oriental costume.

TRIPOLI AND BARKA

Tripoli and Barka, known administratively as the vilayets of Tripoli and Bengazi, the only African territories under the direct control of the Turkish Sultan, lie along the Mediterranean coast between Tunis and Egypt. Their southern limit is in the vicinity of the Tropic of Cancer; the eastern and western frontiers are imperfectly defined. The division between Tripoli and Barka is naturally indicated by a bold indentation of the coast, the Gulf of Sidra.

Surface. Tripoli consists in the main of a vast stony, sandy plateau, broken to some extent by transverse chains of hills and with a northern scarp of limestone cliffs culminating in the extinct volcano of Takut (2,800 feet). North of these hills are the cultivated coastal plains of Tripoli (Jefara). The plains at their widest part do not extend more than seventy miles from north to south, and the few rivers that water them, accordingly, are short. In the south of Tripoli proper is the Hammada El Homra, a red sandstone plateau about 1,500 feet above sea-level, south of which is Fezzan, in the oases of which dwell tribes nominally subject to Tripoli, but practically independent. Barka is a limestone tableland with a rather rugged escarpment facing the sea, fringed along the coast with red alluvial plains, and merging on the south into Barka-el-Beida or the White Desert.

The coast lands of Tripoli have a mild climate and a moderate rainfall, the mean annual temperature being about 70°. Barka has a slightly higher temperature and a winter precipitation of from fourteen to twenty inches. Both vilayets are subject to sandstorms from the desert. In the interior the mean annual temperature is from 82° to 86° and rain falls but rarely.

People. Arabic is spoken in these regions, but the population is of Berber stock, with an increasing admixture of negro blood toward the south. The accepted estimate gives the two vilayets a combined area of 398,900 square miles and an average density of three inhabitants to the square mile. The chief towns of the coast as well as of the interior owe their relative importance to the caravan trade. Tripoli, the seat of government, is a walled town with an open harbor, which, like all the ports on the Gulf of Sidra, is unsafe in winter. It is the terminus of caravan routes from Timbuktu, Dar Fur, and Siwah, and carries on a thriving trade in ostrich feathers, skins, ivory, gold-dust, alfa, dates, and textiles. Bengazi, the capital of the vilayet of Barka and the only seaport, has a small trade, chiefly with Malta. Ghat, Ghadámes, and Murzuk (Moorzook) are towns that have developed at the oases along the caravan routes.

ISLAND OF PHILAE

About a mile above the First Cataract of the Nile is an island of granite bearing the ruins of a magnificent temple dedicated to Isis. This spot was the fabled burial place of the great deity Osiris, whom the ancient Egyptians worshiped, and has been famous for ages. The island and most of the ruins are now covered by water, the valley having been flooded by the erection of an immense irrigation dam 100 feet high.

PYLON AT KARNAK

EAST AFRICA

EAST AFRICA is a geographical phrase used, like that of West Africa, to group a mass of contiguous political areas that belong, with one exception, to European powers. East Africa, in this sense, extends from the borders of Nubia and the Anglo-Egyptian Sudân to about the latitude of the Orange River. It includes also the great island of Madagascar and several smaller insular groups. The powers asserting claims to the region are Great Britain, France, Germany, Portugal, and Italy. Abyssinia is now conceded to be an independent State.

Lying mostly on the eastern slopes of the great continental plateau, the western edge of this area coincides roughly with the great water-shed of Africa, whose height, in Abyssinia, rises to an elevation of 7,000 feet, with some peaks of 15,000 feet. South of the equator, where the highlands show recent traces of volcanic activity, there is a system of great lakes which is destined to play an important part in the commercial future of the continent.

NEGUS OF ABYSSINIA

Menelik, ruler of Abyssinia, claims descent from King Solomon. He was of the royal family of Shoa and secured chief power in 1889 after his predecessor had been killed in battle with invaders from the Sudân.

ABYSSINIA

Abyssinia, the ancient Ethiopian monarchy, and the only native African State that by force of arms has compelled a European nation to acknowledge its independence, comprises the kingdoms of Tigre, Amhara, Gojam, and Shoa, lying on the rugged plateau south of Nubia. The four kingdoms are joined under the feudal control of the Negus Negust, whose sovereignty also extends over a great area to the south and east of the plateau, inhabited by various tribes. The total area is reckoned variously from 150,000 to 700,000 square miles, the differences being caused by the indefiniteness of the frontier line.

The government is an absolute monarchy in which despotism is curbed by the semi-independence of the provincial chiefs, who are practically petty monarchs within their own territories. The mechanism of government is very crude and bears a very close resemblance to the forms that existed in Europe during the Middle Ages.

Surface Features. The Abyssinian table-land is the highest in Africa, having a mean altitude of between 6,000 and 7,000 feet. The interior of the country is seamed with great valleys and canyons of extraordinary depth. Mountains, chaotically grouped on the plateau edge, rise to 15,000 feet. Everywhere throughout the region is evidence of tremendous volcanic upheavals in the remote past, but the only igneous district of interest is near Mount Antotto, southwest of Ankober. The great gorges are due largely to erosion by the rivers. Two of the important streams, the Barka or Baraka and the Hawash, find their way eastward to the Red Sea and the Gulf of Aden, but otherwise the table-land drains toward the Nile Valley. Lake Tana is the great reservoir of Central Abyssinia, having 1,200 square miles of area. From it flows the Bahr-el-Azrek or Blue Nile, which escapes from the plateau by a great series of cataracts. The Sobat and the Atbara also rise in Abyssinia.

Resources and Commerce. In the alluvial sands of the rivers south of the Bahr-el-Azrek gold is found in abundance, especially in the Walega and Beni Shongul districts. Little is known of the other mineral resources of the land except that iron is present in large quantities. The coffee shrub is indigenous. Wild indigo, commercial gum-trees, and ebony and other valuable woods also flourish in the hot belt. In the temperate zone the grasses and cereals of Europe are of indigenous growth; the culture of the vine is susceptible of profitable development and other fruits thrive satisfactorily, while in the forests are found such trees as the turpentine, juniper, and several varieties of sycamore. On the more elevated plains and ambas of the cold zone only the hardiest cereals can be cultivated, but the excellent pasturage makes cattle, goat, and sheep grazing the national industry.

There are no good roads in Abyssinia. Transportation is effected by means of mules, pack-horses, and camels, commerce being limited almost entirely to the dry season from September to June. Towns are numerous but of small size. The two most important commercially are Adis Abbeba, the capital, and Harrar. The principal exports that pass through these marts are ivory, gold, musk, and coffee. There is also a large local trade in corn, flour, cotton, indigo, cattle, hides, beer, wax, and honey. Imports are not large.

History and Culture. Abyssinia may be said to possess a measure of civilization, derived from the Greeks before the Arabs cut off the country from the north, causing an isolation later rendered complete by the Saracenic and Turkish occupation of the principal Red Sea port, Massaua. The Abyssinians are of original Hamitic stock, with added Arabian and negro blood. As early as 328 A. D. the nation was converted to the Christianity of the Coptic (Egyptian) rite, and the Church succeeded, although with difficulty, in resisting the endeavor of the Moslems in the 16th century to supplant Christianity with Islamism. Italy, by virtue of a treaty of 1889, laid claim to a protectorate over the whole of Abyssinia, but in 1896 the Abyssinians defeated an Italian army at Adua (Adowa) and compelled Italy to confine narrowly its colonizing activities to Eritrea and Somali-land.

RUINED PALACE AT GONDAR

Extensive ruins of an old palace at Gondar, in Abyssinia, preserve the memory of King Yasous II., whose devotion to the arts of peace brought upon him from his warlike subjects the contemptuous title of "Yasous the Little." This building, erected in 1736, was a castle of stone work encircled by immense defensive walls and surmounted by towers and battlements.

VERANDA OF PALACE AT ADIS ABBEBA

The palace of the Negus is a large wooden structure surrounded by a series of enclosures and having adjacent to it the great banquet hall where 2,000 warriors can be dined at once. The sovereign's residence abounds in wide verandas whose scores of slender columns are backed by masses of carved latticework. In the second story is the audience hall of the Negus.

Education is of an exceedingly limited range. It consists in the teaching of the clergy, who instruct some of the children under their parochial influence in the elements of grammar, poetry, and choral singing and in the recitation of portions of the Bible. The ecclesiastical language is the oldest known form of the Himyaritic. The Church has as its head the Abunaa Copt, named and consecrated by the Patriarch of Alexandria.

DEPENDENCIES

French Somali Coast. Extending from Cape Dumeira to Cape Gumarle is a French dependency with an excellent harbor. The territory is of small importance so far as its own resources go, but within the last few years it has taken on new value because of a railroad which the French are building and which promises to make this district the outlet of a rich trade between Abyssinia and the outside world. The terminus of the railway is at Jibuti, the administrative center of the dependency. From Jibuti the route extends southwest to the town of Harrar and from there is to turn westward, skirting the Abyssinian plateau for an entrance into the highlands from the south side.

MASAI BOWMEN

The lithe and active Masai people, in British East Africa, are skillful hunters, using the bow and arrow as their chief weapon.

PAPYRUS BOATS ON THE UPPER NILE

The negro tribes that live along the course of the Upper Nile from Lake Albert to the Sudân use curious water craft made from the papyrus reeds that grow luxuriantly along the river's shallow edge. Bound tightly together and smeared with some waterproof compound, these reeds make rafts that are fair substitutes for durable boats if not used roughly.

The dependency has an area of about 46,000 square miles. Its native inhabitants are chiefly Gallas, who have herds which they pasture on the grassy valleys of the interior. The chief exports are live stock and animal products, wax, coffee, and ivory. French vessels make the place a coaling station and there is also a garrison.

Italian Colonies. Eritrea extends on the Red Sea Coast from Ras Kasar to Cape Dumeira. The area is about 88,500 square miles. Economically, the region has thus far proved almost valueless, although there is promise of agricultural development in the more healthful uplands of the north, where wheat and barley thrive. The pearl fisheries and mother-of-pearl industry of the Dahlak (Dhalak) archipelago yield products, and there are also some gold deposits. The principal industry of the natives is grazing, the chief local trade being in the products of their flocks and herds. Massaua, the only important town of Eritrea, is built on a coral island. Asmara is the seat of government.

The 180-mile strip of the Somali Coast under Italian protection has for its boundary with British East Africa the Jub River. Italian protectorate rights in this region are derived from treaties with the Sultan of Obbia, the Sultan of the Mijertin Somalis, and the Sultan of Zanzibar The estimated area of the protected districts is 100,000 square miles. The region is partly arid and has no commercial value as yet.

British Somali-land. An area estimated at 60,000 square miles, under British control, is situated on the south side of the Gulf of Aden. Near the coast a mountain range extends eastward as far as Cape Guardafui, and from its heights the land slopes gently toward the south. The interior is almost unknown, being inhabited by nomadic tribes of Mohammedan herdsmen. It is believed to be arid or watered by periodical streams too small to reach the sea.

Politically and commercially the country has no real importance. British influence was fostered in the region because it lies along the sea route between England and India. The only administration, however, is the influence exerted by the British consuls at the three seaports of Berbera, Zeyla, and Bulhar. The natives have their own tribal system. Skins, cattle, sheep, gums, and ostrich feathers are exported. Camels and donkeys, following caravan paths across the interior, are used by the Arab merchants to conduct internal trade with the tribesmen.

British East Africa. A large territory is claimed and partly occupied by the British. The area of this region is yet uncertain because of the lack of any agreement with Abyssinia as to the common frontier. Politically the territory, so far as occupied, includes three subdivisions, the East Africa Protectorate, the Uganda Protectorate, and the Zanzibar Protectorate. The former two are each under British commissioners, located at Mombasa and Entebbe, holding administrative and military powers. The last-named is ruled by its hereditary sultan, under the advice of the British Agent.

The flora is diversified. On the coastal plain and the islands are palms, fruit, and spices; on the plains the scanty vegetation consists of acacia, thorn-scrub, scattered tufts of grass, and occasional growths of Euphorbia, Sansevieria, and aloe; the plateaus contain forests of conifers and jungles of bamboo; and on the heights flourish

DAR-ES-SALAM, GERMAN EAST AFRICA

The German colonial office has planned its East African capital with the hope that some day in the near future it may become not merely an official but also a commercial metropolis of the Dark Continent. The houses of the European residents are especially planned for comfort in the hot African climate, and their wide verandas face broad, clean streets shaded with palms and other tropic verdure. A pretty Lutheran church adds to the beauty of the town with its tall spire and graceful lines of stone work.

Mediterranean species. The fauna consists of great mammals such as the elephant, rhinoceros, hippopotamus, giraffe, and antelope; of tropical reptiles like the crocodile, python, and cobra; and of many varieties of birds, among which the more abundant are the flamingo, pelican, weaver-bird, and sunbird.

The chief racial groups of the country are the Arabs, who form the most important political and commercial element of Zanzibar and other coast towns; the Bantu races of the interior, pastoral and agricultural, possessing a rude civilization, and the Nilotic negro races of the northwestern districts. Staple exports are ivory, copra, grain, hides and horn, rubber, cloves, cattle, and goats. The mountain region is rich in mineral wealth but it is not yet under development. In 1901 was completed a railway from Mombasa to Victoria Nyanza, 584 miles, giving an eastward outlet for the products of the interior.

LUGARD'S FALLS, BRITISH EAST AFRICA

Across the coastal plain that lies between the escarpment of the continental plateau of British East Africa and the Indian Ocean the Sabaki River finds its way, falling tumultuously over great rifts of rocks that mark the edge of upturned strata or rolling silently across great level stretches of fever-haunted swamp and jungle. One of the prettiest of the falls that mark its course has been named from the explorer Lugard, one of the first white men to traverse this region.

British Central Africa. The region south of Lake Tanganyika and west of Lake Nyassa, formerly called Nyassa-land, ranks as British protected territory under the direction of a commissioner. Physically it is an elevated plateau, upon which are superimposed mountains reaching in some peaks a height of 10,000 feet. The drainage is into the great lakes and into the Zambezi River, which flows parallel to the southern boundary. The area is reckoned at 42,217 square miles. Zomba, in the Shire region, is the seat of British administration.

The natives are members of Bantu tribes, engaged chiefly in stock raising, with a limited agriculture. They are largely of the Mohammedan faith. The district is also a promising field for mission work and there are a large number of stations. Under European direction commerce is rapidly growing. Upon Lake Nyassa a fleet of trading steamers has been established and new roads have been marked out across country. Coast commerce enters by way of Chinde in Portuguese territory, where the English have special port privileges and a concession.

German East Africa. A region estimated to include 384,000 square miles lies south of British East Africa, bounded eastwardly by the Indian Ocean and westwardly by the highland watershed of the continent and by Lake Tanganyika. The coast is chiefly a coral formation, low and sandy, covered with low shrubs. At Dar-es-Salam, the administrative center, Bagamoyo, and Kilwa are good harbors. Mangroves, cocoa-palms, and bananas grow on the coast. Higher up are dense forests with silk-cotton and copal trees, tamarisks, banians, and sycamores. On the upper altitudes are grass lands and steppes with hardy desert plants.

From Vincent's Actual Africa

PALACE, ANTANANARIVO

The former royal residence of the Madagascar rulers is a large edifice overlooking from a hilltop the remainder of the city. On the lower floor was the great reception hall where foreign visitors were received. Above this were the living apartments of royalty. Around the palace stood the hovels of subjects.

The people are mostly Mohammedans. The Bantu races of the interior are agricultural and pastoral. Near the coast are elements of Arab and Indian blood. The native people are active and warlike. In natural resources the country is rich. Rubber, copal, fiber, pepper, cocoanuts, sesame, sugar-cane, tobacco, cotton, vanilla, rice, bananas, manioc, and hemp are among the plant products. Among animal products are hides, ivory, tortoise-shell, and pearls. Coal, iron, gold, salt, and graphite have been located but are yet untouched. Ivory, rubber, gums, coffee, and sesame are the chief exports. There is one short railway from Tanga inland.

Madagascar. With an area of 227,750 square miles, Madagascar ranks as one of the largest islands in the world. Its interior is a vast plateau, broken by longitudinal mountain ranges that rise to over 9,000 feet, from which the land slopes steeply to the east coast and more gently toward the west. There are many evidences of quiescent volcanic conditions. The principal rivers flow westward and are navigable only in their estuaries, which form harbors of considerable commercial value. There are also extensive marshlands on the west coast which make the region unhealthful for Europeans. On the elevated interior, however, conditions are very favorable. The soil of the island is well watered, except in a few localities, and supports a tropical flora of remarkable variety.

The principal industries are cattle raising and agriculture. The chief crops are rice, manioc, sugar, coffee, cotton, cacao, vanilla, and sweet potatoes. The article which the island produces in greatest quantity is rubber. Metal working and the manufacture of textiles of cotton, silk, and raffia fiber are important industries which, up to the present time, have been carried on without the aid of any but the most primitive machinery. The principal exports of the island are india-rubber, raffia, cattle, wax, and

VILLAGE ON THE MADAGASCAR COAST

The ruling race of the Hovas, in Central Madagascar, have shown themselves progressive and inclined to absorb civilization, but the tribal communities of the coast are barbaric. At the heads of the little inlets that break the coast line are found their thatched villages. Here they are untouched by outside influences except when some French official or missionary assumes his lonely station there or when some trader forces his vessel up to their shore to fill out a cargo.

hides; the greater part of the commerce is with France. The principal trading ports are Tamatave and Mojanga, the one on the eastern and the other on the western coast. The largest town is Antananarivo, the capital.

Réunion. Réunion (area 965 square miles), an island about 485 miles east of Madagascar, is administered by a Governor, assisted by a Privy Council and an elective Council-General. Réunion belongs physically to the igneous Mascarene group. It is in general mountainous, culminating in the Piton des Neiges (10,070 feet). There is a central plateau having a mean altitude of 5,000 feet. The climate is mild, notwithstanding a rainfall of 50 to 160 inches annually. The vegetation is of tropical richness and the flora includes many distinctive species. The chief industry is agriculture, the leading productions being sugar, coffee, cacao, vanilla, and spices. St. Denis is the capital of the colony and Pointe-des-Galets is the chief seaport.

BANTU HOUSE

For the typical home of the Zambezi region the circular roof is built first and elevated upon forked poles. Around the poles are put circles of wicker work and the interstices filled with dried grass. Sometimes a partition divides the interior into two rooms.

The Comoro Archipelago (area 760 square miles), a group of four islands lying in the Mozambique Channel, is under the authority of the Governor of Réunion. The islands are volcanic, reaching their culmination in the active cone of the Great Comoro (8,500 feet). All are exceedingly fertile and are almost wholly devoted to the cultivation of coffee, cotton, sugar-cane, vanilla, and spices. Other remote French dependencies, possessing little more than scientific interest, are the volcanic islets of St. Paul and New Amsterdam, and the desolate island of Kerguelen.

BEACH OF HARBOR AT ZANZIBAR

From the bay the waterfront of Zanzibar seems a narrow strip of open beach backed by a solid rampart of stone buildings upon which the hot African sun glares torridly, showing scarcely a hint of busy city life. Closer acquaintance, however, shows that the line of stone walls is pierced by narrow streets which lead to open squares and great bazars beyond, where, mingled in a gaudily picturesque crowd, are people of a dozen or more oriental and African races.

Mauritius and the Seychelles. The British Crown Colony of Mauritius, comprising the island of that name, with its dependencies, lies in the Indian Ocean about 500 miles east of Madagascar. The main island has an area of 705 square miles which is partly volcanic and partly coralline. It has two good natural harbors, Port Louis in the northwest and Grand Port in the southeast. On Port Louis is situated the capital city of the same name. The interior of the island is a plateau broken by three ranges culminating in Piton de la Riviere Noire (2,711 feet). The climate is tropical, but, except in parts of the low-lying coast, is not unhealthful. Disastrous hurricanes occur occasionally. The forests, confined chiefly to the coast, consist largely of cocoanut trees. Practically the whole island is devoted to the production of sugar, which forms nine-tenths of the exports, other items being rum, vanilla, aloe fiber, and cocoanut-oil. The government is that of a crown colony, modified by representative features.

The crown colony of the Seychelles comprises about eighty-nine volcanic and coral islands, of which the chief are the Seychelles group lying 930 miles north of Mauritius. The principal island is Mahé (area 55 square miles). The total area of the colony is 148 square miles. The islands of the main group are well watered and fertile and have a climate unusually healthful for their latitudes. The capital, Victoria, is a coaling station. To the southwest are the coralline Amirantes Islands, inhabited by fishermen.

Portuguese East Africa. Since 1891 the former colony of Mozambique has been officially styled the State of East Africa. It is an area of 293,400 square miles situated east of the British South African colonies and commercially connected with them. The region has a narrow coastal plain intersected about midway by the great continental stream of the Zambezi. Inland the coast country gives place to the interior plateau which rises toward the west until it culminates in mountain ranges and rugged plateaus. South of the Zambezi are the Lebombo Mountains, 2,070 feet in height, and upon the Manhissa plateau several peaks, of which Mount Doe reaches 7,875 feet. North of the Zambezi are the Namuli Mountains, with an altitude of 8,806 feet.

The dependency is administered by a Governor-General at Lourenço Marques. The natives are Bantu races, Mohammedan in belief. Coal, iron, and gold have been found and are being worked. On the coast are considerable fisheries, from which the pearl output is of some value. Cocoanuts, ironwood, indigo, orchil, tobacco, coffee, almonds, sesame, copra, and sugar-cane are produced in the coast region; and on the higher ground, beans, millet, coffee, rice, rubber, and cereals. Manufactures of sugar, liquor, and pottery exist. Two railroads have been built, connecting the coast with the British towns of Pretoria and Salisbury and making the Portuguese ports outlets for British trade. In Delagoa Bay the Portuguese possess a valuable harbor of great strategic importance.

DELAGOA BAY, PORTUGUESE EAST AFRICA

SOUTH AFRICA

BRITISH SOUTH AFRICA comprises the two self-governing colonies of the Cape of Good Hope and Natal, and with them the Transvaal Colony and Orange River Colony, the Basuto-land, Bechuana-land, and Rhodesia territories. The South African dependencies are contiguous and extend, with an area of 1,120,000 square miles, from the southern extremity of the continent northward to the region of the equatorial lakes.

With the exception of a comparatively narrow strip of coastal lowland, South and Central Africa consist in general of a great plateau of between 3,000 and 4,000 feet elevation, watered by three large rivers—the Zambezi, Limpopo, and Orange—with their tributaries, and by numerous smaller streams that are lost in the parched interior or break through the elevated edges of the plateau and descend with rapid courses to the coast. The outer rim of the table-land comprises a broken series of mountain ranges rising in places to 10,000 feet elevation. The climate varies, but on the whole it is dry, equable, and well adapted to Europeans

THE CAPE OF GOOD HOPE

The Cape Colony, as it is popularly called, is officially designated by the longer but legally correct name of the Colony of the Cape of Good Hope. Its total area is about 277,000 square miles, which includes the region of British Bechuana-land, south of the Molopo River. The colored population consists mainly of Kafirs, Hottentots, and Bechuanas, who retain their tribal governments.

Coast Features. The coast-line, nearly 1,200 miles in length, is remarkably uniform in outline. The most striking projection is the mountainous Cape Peninsula, at the upper end of which, facing north on Table Bay, is Table Mountain (3,540 feet), so called from its tabular summit. On the shore of Table Bay is Cape Town, the capital, having an artificially protected harbor. East of the peninsula is False Bay on which is Simons Town, the seat of a naval station. Other important harbors are Mossel Bay, Algoa Bay, and the port of East London. Walfish Bay, situated on the Atlantic, about midway on the coast of German Southwest Africa, is a district of 430 square miles, forming part of the Cape Colony, and is under the jurisdiction of a resident magistrate. It is surrounded by the German dependency. The bay itself, about three-quarters of a mile wide, lies between a sandy peninsula and the mainland and is the only good harbor on the west coast south of the Kunene (Cunene) River. The land is a mass of barren sand-hills inhabited by a few traders and missionaries.

Physiography. Physically, the colony is divided into two portions by a series of lofty mountain ranges (the Nieuwveld, Koudveld, and Roggeveld), following in general the line of the coast at a distance of from 100 to 150 miles from the sea. Inland from this line the slope of the plateau trends gently toward the northwest. Here are the principal mineral districts and large areas of excellent pasture land. South of the watershed the country is subdivided by two minor parallel ranges extending east and west and marking the edges of the two terraces, the Little and Great Karroo, that intervene between the coastal plain and the plateau. The Great Karroo, 300 miles long and seventy miles wide, is a steppe-like region now devoted largely to stock-raising and ostrich-farming.

OLD DUTCH HOUSE

The Cape Colony was originally settled by the Dutch, and although it is nearly a century since Dutch rule ended, many of the Dutch families still live in old houses built in the peculiar Hollandish style.

LAWN OF PARLIAMENT HOUSE, CAPE TOWN

The capital city of the Cape Colony is picturesque in its surroundings of mountains and ocean, but few places in the city itself are striking or possessed of special interest. The chief building is that used for the sessions of the colonial Parliament. It is rather impressive in its architecture and is surrounded with carefully kept grounds and handsome shrubbery. Near one of the wing entrances is a fine statue of Queen Victoria, which faces toward the splendid avenue of oaks that skirts one side of the square in which the building is situated.

Of the streams of this region, the Orange River, with a course of 1,200 miles, is the most important. It rises in Basuto-land near Natal and flows westward to the Atlantic Ocean, draining a basin of about 446,000 square miles. Its most important tributary is the Vaal River flowing from the north. The southern tributaries of the Orange, as the Ongar and the Hartebeest, have usually wide basins, but are rivers during the rainy season only. The Orange itself before reaching the ocean loses much of its volume in flowing through the desert, and is of no value for navigation because of sand-bars. The southern rivers, also, are of slight use as waterways, only two being navigable, the Breede and Umzimvubu.

Resources. The coastal strip on the west of Cape Colony consists almost wholly of rainless and barren tracts of sand. In the southwest, between the plateau region and the sea, are the chief grain and wine producing regions, and in the south are extensive forests. Along the southeastern coast tobacco and maize are successfully cultivated.

GOVERNMENT BUILDING, PRETORIA

The former Raadzaal, or Council House, of the Transvaal Republic faces an open square of the little city of Pretoria and is the most pretentious building in the place. Its spacious offices are now occupied by the staff of British officials.

FALLS IN NATAL

Among the rivers of Natal is the Umgeni, whose course from the Kwathlamba Mountains to the sea is broken by the beautiful Howick's Falls, 200 feet high.

The characteristic features of the native flora are the heaths and "bush," the latter being dense, thorny thickets containing several species of aloe. In the southern central forests the yellow-wood and Cape mahogany are valuble timber trees. The oak, pine, Australian gum, and other trees have been introduced. Almost all of the larger animals have been exterminated or driven northward. The mineral resources include the richest diamond mines in the world, rich copper mines in Little Namaqualand near the mouth of the Orange River, gold in Prince Albert and other divisions, zinc, lead, manganese, and coal.

The production of wool and wine and the raising of horses, cattle, and ostriches are the leading industries. The exports are chiefly diamonds, wool, mohair, ostrich feathers, copper ore, and hides and skins. Imports are mainly textiles and food stuffs.

Government and People. The Governor of the Colony is appointed by the British government, but administration is practically in the hands of the colonial Parliament of two chambers, to which the colonial cabinet of five ministers is responsible. Suffrage is on a property basis. There is a complete system also of local self-government by elective councils. The Transkeian territories and Pondo-land in the east and the region of British Bechuana-land in the north are districts chiefly occupied by native tribes and are somewhat different from other portions in their administration.

The people of the Cape Colony are of three racial groups. The Boers are of pure Dutch or German blood, being descendants of immigrants who came during the period of Dutch rule, from 1652 to 1804. The Afrikanders are of Dutch blood intermixed with that of French Huguenots, of whom there was a large immigration from 1688 onward. The third group is that of British ancestry, whose members have come into the colony since the British conquest in 1804. The Boer and Afrikander elements outnumber the British, retain the Dutch speech and traditions, and are hostile to British rule. Their present attitude strongly affects colonial politics. The history of the Cape Colony since its settlement in 1652 has been one of constant expansion, accompanied, as in the United States, by periodical wars with the native peoples.

NATAL—BASUTO-LAND

Natal Colony occupies that portion of the southeastern coast of Africa extending northeastward from the Cape Colony to the frontier of Portuguese East Africa, a distance of 376 miles. Its area is 36,200 square miles, including 10,450 square miles for Zululand and 7,000 square miles detached from The Transvaal in 1903. Of the population less than eight per cent are white men, largely British, the remainder being native Africans and Indian coolies. The government is vested in a Governor, assisted by a nominated Legislative Council and an elected Legislative Assembly. The capital is Pietermaritzburg.

Resources and People. With the exception of a narrow strip along the coast the country is hilly. Its rivers, of which the Tugela is the longest, all flow into the Indian Ocean, not one of them being navigable. On the northwest the Kwathlamba (Quathlamba) or Drakenberg Range, a part of the main continental divide, separates Natal from the Orange River Colony and Basuto-land. The slope to the sea, as in the Cape Colony, is by successive terraces. The coastal plain, about fifteen miles wide, is very fertile and has a tropical climate. Sugar, bananas, pineapples, coffee, arrowroot, tobacco, ginger, and pepper flourish, and on the uplands tea is cultivated. Except along the coast region the climate is dry, pleasant, and healthful.

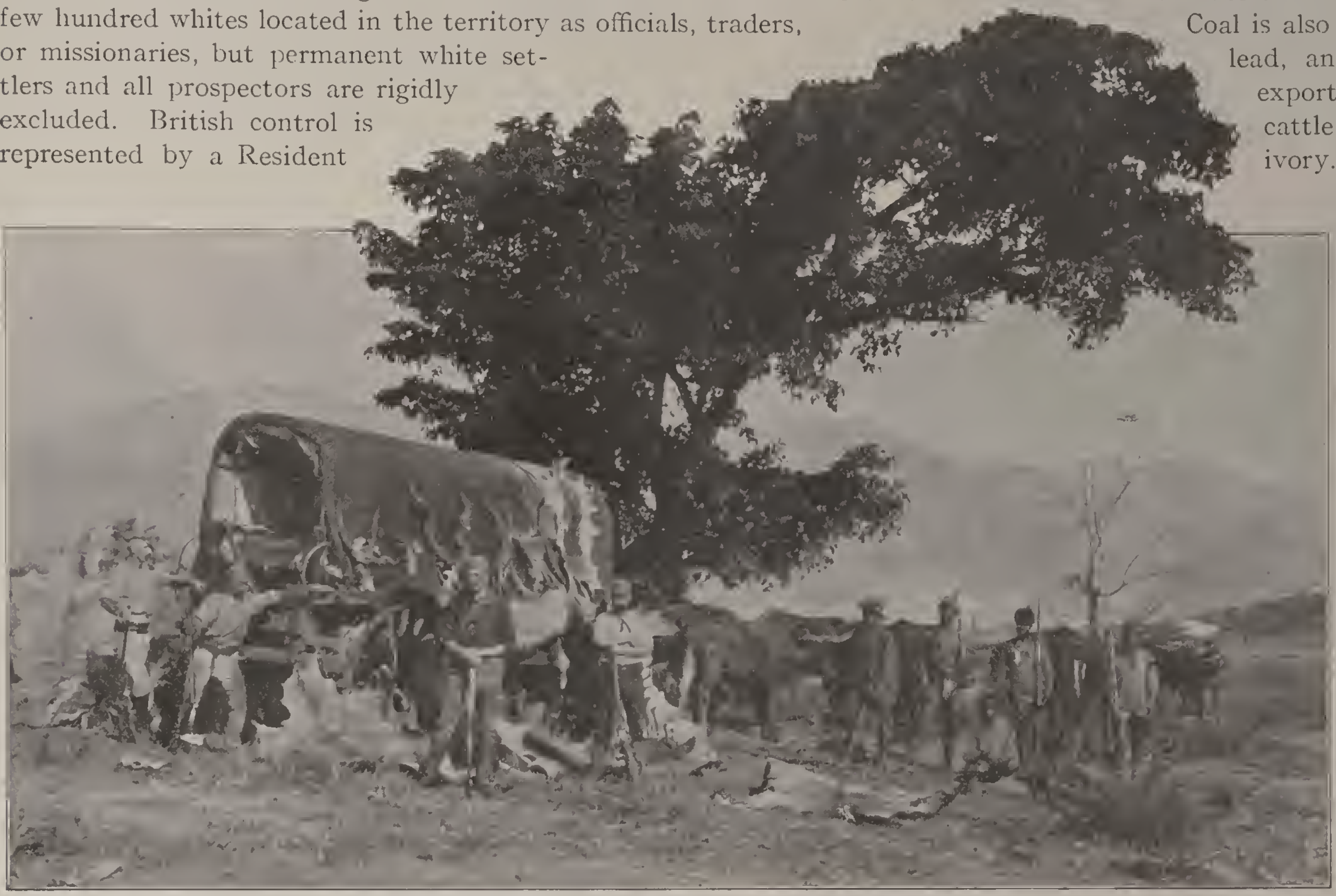
The midland districts are especially adapted to the cultivation of cereals and the more elevated tracts are devoted to cattle-raising and sheep-farming The valleys abound in valuable timber and considerable forested areas occur along the coast. There are extensive beds of coal of a fair quality and rich iron-ore deposits. The principal domestic exports are wool, coal, sugar, coffee, hides and skins, and bark. The only important harbor of Natal is Durban or Port Natal.

Basuto-land. An inland region adjacent to the Orange River Colony, and similar in character to the great Indian

CASTLE GATEWAY, CAPE TOWN

The old Dutch East India Company considered the Cape of Good Hope as an important strategic point guarding their route to the wealth of the Indies, and in 1674 they completed a fortress called "the Castle," to hold the Cape. In time the English built a new "Castle" to supersede the older one and it is still used for military purposes, though useless as a fortification.

reservations of the United States, is called Basuto-land and has the political status of a crown colony. Its area, 10,293 square miles, is about the same as that of Maryland. It is inhabited by the Basuto people, a warlike and intelligent race of native blacks. There are a few hundred whites located in the territory as officials, traders, or missionaries, but permanent white settlers and all prospectors are rigidly excluded. British control is represented by a Resident Commissioner, located at the native town of Maseru, who corresponds in position to the Indian agent of the American reservations, and by a native police force under white officers. The natives are under a tribal system of their own. The chief industry of the natives is cattle-raising, for which the well-watered grassy slopes serve admirably. They have also engaged largely in agriculture, raising wheat, mealies, and Kafir corn. Coal has been mined to a small extent for local needs, but except for this the mineral wealth of the region lies untouched.



HUNTING PARTY TREKKING ACROSS THE VELDT

North of the Orange River are vast stretches of wilderness where there is sport for the huntsman. The larger game, such as the lion, elephant, giraffe, rhinoceros, and buffalo, is rare, but there are leopards, lynxes, and hyenas, besides many varieties of antelope. Hunting parties usually enter the wilderness well armed, with a large covered wagon to carry their baggage, and native blacks as guides. On their return they never fail to show skins of their quarry, and antelope heads, among which the peculiar spiral horns of the koodoo are always prominent.

BOER COLONIES

Under this head may be grouped The Transvaal and Orange River colonies. These regions were settled in 1836–37 by dissatisfied Dutch who migrated from the Cape Colony to escape British rule. Transvaal independence was recognized in 1852 and that of the Orange Free State in 1854. The discovery of gold in 1885 brought English miners into the region, war followed, and after a contest disastrous to British prestige the two republics were conquered and annexed.

The Transvaal. The Transvaal is divided into two regions, the High or Grass Veldt and the Bush Veldt. The former is largely arid. The Bush Veldt, comprising the Limpopo Valley and a long narrow strip along the eastern border is in general well wooded. The interior of the colony is watered by the numerous tributaries of the border rivers, but has no navigable streams. The Bush Veldt has a hot, malarial climate, but the remainder of the country is healthful. The summer heat is tempered by southeast winds; the winter cold is moderated by the dryness of the atmosphere. The area is about 112,000 square miles. Three-fourths of the population are native blacks, chiefly Kafirs.

The principal mineral wealth of the Transvaal region is its gold mines, which comprise alluvial deposits, quartz reefs, and conglomerate rock. To the last-named formation belong the rich mines of the Witwatersrand in the southern part of the colony. Coal is also extensively mined, and copper, silver, lead, and diamonds are found. The leading exports are gold and other minerals, wool, cattle, hides, grain, ostrich feathers, and ivory. Railway lines connect Pretoria, Johannesburg, and other centers with the Orange River and Cape colonies and Natal, and with Delagoa Bay. The largest town is Johannesburg, the chief mining center. Pretoria is the capital of the colony.

Orange River Colony. The former Orange Free State occupies part of the continental plateau south of The Transvaal, from which it is separated by the Vaal River, a tributary of the Orange River. The latter stream divides it on the south from the Cape Colony, which also bounds it on the west, while on the east the colony is bounded by Basuto-land and Natal. The estimated area is 48,326 square miles. About two-thirds of the population are blacks. The larger part of the whites are Boers. The level or gently undulating surface of the Orange River Colony is broken by ranges of hills and by many isolated, rocky eminences (kopjes) from 500 to 700 feet high. There are numerous tributaries of the border rivers, but no navigable streams. The plains are covered with verdure only during the rainy season, from November to February. The winter cold in the uplands is more severe than in The Transvaal. There are no forests and few trees are found. Cattle breeding is the principal industry, and irrigation is in general necessary to successful cultivation. The mineral resources are much inferior to those of The Transvaal. Agricultural and animal products and diamonds are the principal exports. The colony is well provided with railway facilities. The capital is Bloemfontein.

SORTING GRAVEL FOR DIAMONDS, KIMBERLEY

At Kimberley, where the greatest diamond fields of the world are located, the gems are found among the small stones embedded in a thick stratum of heavy clay. To secure them the clay is pulverized and washed by machinery until the only residuum is a quantity of loose, heavy gravel, in which the heavy diamond pebbles are sure to be included. The gravel is then spread out upon steel-covered tables under the eye of an overseer and there picked over by sharp-eyed men until thoroughly cleared of the precious gems.

SOUTH CENTRAL AFRICA

The great interior wilderness of the continental plateau that is claimed as within the British sphere of influence and is administratively connected with the South African colonies has an area of about 644,000 square miles. It includes three great divisions, Bechuana-land, Southern Rhodesia, and Northern Rhodesia. The latter two form the territory of the British South Africa Chartered Company.

JOHANNESBURG MARKET PLACE

The chief commercial city of The Transvaal region is the center of the Witwatersrand gold fields and the distributing point for the gold fields and the sparsely settled farming region near it. A typical city scene is the great Market Square where the Boer farmers bring their produce in their clumsy wagons drawn by yokes of oxen.

Bechuana-land. The Bechuana-land Protectorate extends northward from the Molopo River, the northern boundary of British Bechuana-land, to the Zambezi River. Its area is about 380,000 square miles. The population is almost entirely native, and comprises the Ba-Mangwato, the Ba-Khatla, Ba-Kwena, Ba-Ngwaketese and other tribes. The Protectorate lies mainly on the western slope of the high plateau of South Africa, with an average elevation of 3,500 feet. The climate in general is healthful, but there is a great scarcity of water. Agriculture and the raising of cattle, sheep, and goats are the leading industries. The tribal system remains intact under the direction of a Resident Commissioner, with assistants, but the British exact a hut tax from the chiefs and have a native police force to keep order. Palapye, on the Lotsani, the capital of the Ba-Mang-wato, is the largest native town in South Africa.

A KLOOF IN THE TRANSVAAL REGION

In the language of the South African Boers a "kloof" is a ravine or a gap between two hills. Usually these kloofs are fitted with clumps of shrubbery and large boulders, making them ideal spots for guerilla warfare against an invading enemy. During the war incident to the British conquest of The Transvaal the Boer soldiery made the most of these natural features of defense and the invading forces suffered heavily.

Rhodesia. The region named from Cecil J. Rhodes, whose efforts secured it for the British Empire, lies north of the parallel of 22°, and extends from The Transvaal and Bechuana-land to the Congo State. The Zambezi divides it into Northern and Southern Rhodesia. The British South Africa Chartered Company, which holds the country, was chartered in 1889 with powers to possess, administer, and develop the region of which it should take control. Its headquarters are in London. Rhodesia is administered by the officials whom it sends out, but they are under the oversight also of a Commissioner sent by the British government, and the system of which they form a part is formulated by the British government. For administrative purposes, Southern Rhodesia is divided into two provinces, termed Mashonaland and Matabili-land, after the native races occupying them. Salisbury is the administrative center.

Rhodesia lies on the great continental plateau, rising from 3,000 to 5,000 feet above sea level and having a cool, bracing climate. The Zambezi River, one of the four great African streams, is its chief waterway, its great basin of 550,000 square miles being very largely included within Rhodesia. Falls and rapids make the river largely unfit for navigation. The famous Victoria Falls, discovered by Livingston, are 1,000 yards wide and 360 feet high. There are many small rivers upon the plateau, which is described by explorers as being diversified country, well watered and having good soil, with much open country. Tobacco, rubber trees, cotton, and indigo are said to be indigenous. Experiments are being made in growing these and coffee, wheat, and fruits. In mineral resources, the region is rich. Extensive coal-mines have already been opened at Wankie near Victoria Falls, and the gold-fields are being exploited with profitable results. Silver, copper, and lead have also been located.

Cape to Cairo Railway. The efforts of the Chartered Company in Rhodesia to develop the commercial possibilities have been directed in no small degree to the construction of railways, and the roads that now penetrate the region, pushing steadily northward, will, within a very few years, reach the equatorial lake region and complete the cherished project of a "Cape to Cairo" continental railway system under English control. In 1897 the line from Bechuana-land to Buluwayo, in Rhodesia, was opened to traffic. Since then the extension of the system has created two diverging lines. One, turning northeast, was carried to Salisbury, where it connected with another line, completed in 1899, that crosses Portuguese East Africa and reaches the eastern coast. The other extension turned northwest and in 1903 reached the great Wankie coal-fields, from which it was continued to Victoria Falls, crossing the River Zambezi in May, 1904. From that point it is being continued northward.

MAJUBA HILL

Here, in February, 1881, a force of Boer soldiers stormed the heights against great odds and drove the British forces off with terrible slaughter.

WEST AFRICA

WEST AFRICA is a convenient phrase to indicate the group of African political areas extending from the Sultanate of Morocco southward to the English colony of the Cape of Good Hope. With the single exception of the little Republic of Liberia the whole region on the western continental coast is parceled out by mutual agreement among the European powers. Belgium, France, Great Britain, Germany, Portugal, and Spain are the nations which possess portions. In general configuration the African continent consists of two vast plateaus separated from each other by an irregular depression from the head of the Gulf of Guinea to the Red Sea. The drainage system consists of immense streams which have their sources in the elevated parts of the plateaus and flow to the ocean, broken by rifts and falls where the plateau level descends to the narrow coastal plain. The Congo and Niger, both highways of commerce, are the most famous of these West African streams.

GOVERNMENT HOUSE, DUALA

The new towns which are growing up at the seats of government of the German colonies in Africa are well laid out and remarkably neat in their appearance. At Duala the chief building, built of terra-cotta brick, stands upon the summit of the bluff that overlooks the river. Its ample proportions are made especially effective by the wide verandas that extend around it.

CONGO INDEPENDENT STATE

This region, whose area is supposed to be about 925,000 square miles, occupies the inland equatorial region of the continent and includes the greater part of the great Congo basin. The sea-coast frontage is very small, only about thirty miles, merely enough to secure an outlet to the sea and possession of the river's north bank. The surface of the State is, in general, a series of irregular plateaus, shading gently into wide river valleys and largely covered by dense tropical forests. All the larger rivers rise in the highlands and flow northwesterly until they reach the Congo, 2,500 miles long and one of the greatest rivers of the world.

People, Flora, and Fauna. Of the people in the limits of the Congo State only about 2,500 are white, the remainder being native Africans, not strictly negroes, but classed by ethnologists as of Bantu stock. All through the State the native dialects resemble one another, showing close race kinship. The culture of the people is crude. They know the arts of smelting iron and of weaving, but they are not inventive. Politically they are organized in numberless tribes.

The flora and fauna are mainly the familiar forms of tropical countries. The palm, ebony, teak, mahogany, and baobab are common trees. The elephant, hippopotamus, wild-ox, chimpanzee, gorilla, and crocodile are notable among the larger beasts. The peculiar climate and rich soil provide the State with marvelous agricultural resources, which are being developed by Europeans.

Government. The government is a limited autocracy. Although the country is ruled by Belgians and aided by Belgian public money, it is legally an independent State whose sovereign is Leopold, also King of Belgium. The seat of government is at Brussels, where the king has a group of officials to conduct its affairs. Local administration is in the hands of a Governor-General, residing at Boma on the Congo, and assisted by a staff of local officials. There is a force of soldiery, a postal system, courts, and other features of government. As a rule there is little interference with the tribal affairs of the natives, the chief source of discord having been, heretofore, the efforts of the Belgians to break up the slave trade in the eastern portion of the State. For administrative purposes the State is divided into fourteen districts, in each of which there is a commissioner to control matters. The chief work of these officers is to protect the European stations, keep open the trade routes, maintain inter-tribal peace, and foster commerce with the natives.

Commerce. The chief interest of the Congo State lies in its commercial features. The development of its marvelous resources is the effort of the Belgians. Until taken in hand by them, there had been no large trade up the Congo because of the inability of ocean vessels to pass the cataracts, 115 miles inland from the sea. By establishing permanent stations inland and building a caravan road around the cataracts, access was gained to the upper navigation and the great basin opened to trade. At present a railroad 250 miles long parallels the old caravan route around the cataracts, with termini at Matadi and Leopoldville. A fleet of steamers plies on the long reaches of the river from Leopoldville upward. With these facilities the commerce of the country has gone forward rapidly. Great plantations have been established under government supervision. Coffee, cacao, tobacco, cotton, rice, peanuts, yams, cassava, bananas, pineapples, sweet potatoes, and sorghum are under cultivation, native labor being used. The chief materials of commerce, however, are india-rubber, gathered by natives in the forests, and ivory, secured by hunting. From these two products come the present large profits.

STREET IN FREETOWN, SIERRA LEONE — From Vincent's Actual Africa

Freetown is built upon low ground sloping gently upward from the beach. There are a few large warehouses near the water and on the rising ground are military barracks and hospital, but otherwise the buildings are not notable. Nearly the whole population is negro and the houses range from the neat cottages of the white traders and missionaries to the rough huts of the poorer blacks. The grass-grown streets are usually filled with a motley crowd.

LIBERIA

The Republic of Liberia has a coast-line of about 500 miles, its area being estimated at 35,000 square miles. From a narrow strip of mangrove and pandanus swamps at the coast, varied by sandy and rocky elevations, the surface rises in a series of vast natural inland terraces.

Resources and History. Near the coast, plantations flourish. Liberian coffee is of good quality and has an established repute in the world's commerce. Other export products are cocoa, cotton, rubber, palm-oil and kernels, kola-nuts, arrowroot, sugar, ginger, indigo, ivory,

LAKE MANTUMBA, CONGO STATE

A great shallow lake, whose margin, broken by rocky headlands and deep bays, widens and contracts with the changing seasons, is located between Lake Leopold II. and the Congo River. It has two peculiar features—its waters are dark colored, owing to the masses of iron rock on which it rests, and its outlet to the Congo reverses and becomes an inlet in time of low water.

hides, and dyewoods. Gold deposits and coal-fields of great value exist and some mining concessions have been granted. Magnificent forests exist in the interior.

The history of Liberia is of special interest to Americans. It was founded by the American Colonization Society in 1822 in the belief that emancipated negroes would like to return to their own country. In 1847, under American auspices, its people organized politically on the model of the United States and were recognized by the American, English, and French governments as an independent State. The republic has an elected President and Congress. Its capital is Monrovia at the mouth of the Mesurado or St. Paul River. Only persons of negro blood can vote. Many efforts have been made at various times to turn a stream of negro emigration from the United States to Liberia, but with the feeblest response from those most concerned.

Senegal and Senegambia. The French possessions of the Southern Sahara, the Western Sudân, the West Coast, and the Upper Guinea Coast form a single administrative area of vast extent, reaching northward to the Algerian and Moorish bounds, eastward to the Nile basin, and southward to the Gulf of Guinea. The capital is at Dakar, on the west coast. In area it has 2,600,000 square miles.

Senegal Colony, which is a subordinate division of this area, occupies the Atlantic Coast and extends inland some 300 miles on both banks of the Senegal River. Its surface is arid lowland in the north, swampy or forested lowland in the south, and rich jungle or forest country along the inland river valley. The chief towns are Dakar, a fortified seaport; St. Louis, trading town and seaport; Carabane, fort town at the mouth of the Kazamanza, and Bakel, inland trading station on the Senegal River. The present exports consist chiefly of forest and jungle products, such as rubber, peanuts, kola, cocoanuts, gums, and castor-beans.

Senegambia and the Niger is the official term, since 1902, for the interior region of French West Africa. From the town of Kayes on the Senegal River are controlled the French stations of the Senegal and Niger basins and the Southern Sahara. The region is not thoroughly occupied and is imperfectly known. Timbuktu, the chief town, is the great center of caravan trade for the whole interior region and is the northern outpost of actual French occupation.

French Guinea Coast. Three subordinate areas of the French West Africa government, namely, French Guinea, the Ivory Coast, and Dahome, are located on the Upper Guinea coast. The more northern parts of these districts are mountainous, but the coasts are low and swampy. The whole region is well watered by numerous rivers that reach the sea. Near the coast dense forests cover the ground and the humid air is almost unbearable to Europeans.

French Guinea includes several negro States. Konakri is the capital and chief port. Boke is an interior trade center. Under French direction agriculture has been fostered. Large numbers of cattle are owned, while rice, millet, and coffee are raised by the natives. The usual tropical forest products are exported. Gold exists in some places. A railroad is under construction from Konakri to the Niger and will aid in developing trade with the interior.

NATIVE HOME, CONGO RIVER

African architecture is very simple, but the curved thatched roofs and rude verandas raised from the ground often have a pleasant effect to the eye, despite the rough condition of the building materials that are used.

The Ivory Coast, east of Liberia, is so called because formerly one of the greatest points of ivory trade. Bingerville, formerly Adjamé, is the administrative center, and Grand Bassam the chief port. Gold deposits are being worked. The forests yield mahogany, rubber, cocoanuts, and palm-oil. There is still some ivory exported. Coffee culture has begun, but is not yet extensive.

Dahome has Porto Novo as capital; Whydah and Kotonu are the seaports; Abome is the negro capital. The people raise maize, manioc, yams, cotton, coffee, and sugar-cane. Palm-oil and palm kernels are the chief exports. A railway has been begun, which will extend northward from Kotonu into the interior.

DEPENDENCIES

French Congo. The French Congo country, with an area of 450,000 square miles, rises by a series of long, parallel terraces to the central table-land, which has a mean altitude not exceeding 3,000 feet. The escarpments reach their culmination in Mount Batta (5,000 feet). Owing to the configuration of the coast lands, none of the perennial streams of this region of perpetual rains is navigable for vessels of any considerable draft from the coast into the interior. Almost on the equator is the greatest river of the French Congo, the Ogowe, 500 miles long, navigable for launches for 200 miles and draining an area of about 130,000 square miles. The Congo River is the southern boundary of the dependency.

The mineral resources of the colony include gold, copper, and iron. In the northern belt of tropical forests are found rubber and valuable woods. The natives raise manioc, and the culture of coffee, cacao, and vanilla is followed by Europeans. Ivory, palm-oil, palm-kernels, kola-nuts, and piassava are also gathered for export. Loango is the principal seaport. Trade has thus far been hindered by inadequate freight facilities, but a railway is projected.

RAILROAD IN THE CONGO STATE

The mountainous region, whose ridges break the even course of the Congo River into great cataracts and rapids, is crossed by a railroad which transports passengers and freight from the coast to the navigable part of the river. Along some parts of the line the craggy hills show scenes of great beauty.

Nigeria. The most important British African territory north of the equator is Nigeria, so named from the River Niger, in whose basin the greater part of the dependency is located. The extreme northeasterly portion belongs to the basin of Lake Chad, to whose shore the district extends. It comprises the two distinct administrative areas of Northern Nigeria and Southern Nigeria.

Southern Nigeria is that portion occupying the coast and lower waters of the Niger. Its area is about 48,000 square miles, and its population about 2,500,000. The native peoples are negroes, mostly of a low scale of culture, a few tribes, however, being agricultural and pastoral. Cannibalism is practiced. In physical features the country is similar to other Guinea Coast dependencies. The coast lands are low and malarious. Back of the narrow coast are dense forests. Bonny is a famous seaport trading station. The chief commercial product of Southern Nigeria is palm-oil, the coast region being often called the Oil Coast. Palm kernels, rubber, gums, ivory, mahogany, and hides are also exported. There is no railroad as yet.

Northern Nigeria is much the greater district in area, having about 320,000 square miles and 20,000,000 population. The government is located at Zungeru on the Kaduna River, where the High Commissioner resides. Physically the region consists of irregular uplands, rising in places into low mountains.

BUYING IVORY ON THE CONGO

The purchase of ivory from the natives by the European traders who maintain factories on the Congo is a tedious affair for the latter, but an occasion of great self-importance and formality to the natives. The process of barter is a complicated one and etiquette requires that the trader give presents to all members of the ivory caravan when the sale is complete.

Gambia and Sierra Leone. Gambia comprises a narrow strip of British territory lying on both sides of the Gambia River from its mouth to Yarbutendi, where navigation ends, about 220 miles inland. The colony, including protected territories, has an area of about 4,500 square miles. In general, the surface of the country is low and marshy, but toward the east is a region of hills of slight elevation. The products are mainly peanuts, palm-kernels, hides, rice, cotton, and india-rubber.

Sierra Leone, which has an area of about 30,000 square miles, is mountainous, but the coast is low and swampy. While many rivers water the country, few are navigable. The natural products of the country, such as palm-oil, benne-seed, hides, peanuts, kola-nuts, india-rubber, and copal, form the chief staples of trade. Freetown, the capital, is the chief seaport, military headquarters, and coaling station of British West Africa.

BOATS AT ISANGI, CONGO RIVER

The river tribes of the Congo fit out their canoes like house-boats and make long journeys in them. At Isangi, near the mouth of the Lomami River, which is one of the important points of the boating route above the cataracts, may often be seen large fleets of these canoes, whose owners live in towns close by the river banks and subsist chiefly by fishing.

Gold Coast and Lagos. The Gold Coast, which extends along the Gulf of Guinea from the French Ivory Coast on the west to German Togo-land on the east, covers an area of about 119,000 square miles. The greater part of the country is low, but there is a range of hills stretching northwestward from the lower Volta River into Ashanti. The climate is unhealthful. Products are palm-oil and kernels, rubber, and native woods. Accra is the capital.

Lagos Territory has a total area of about 29,000 square miles. Flat and swampy tracts of land compose the greater part of the surface, and the climate is exceedingly unhealthful. The people belong mainly to the Yoruba race. Very few whites live in the colony. The principal crops are maize, yams, cassava, and plantains. Peanuts, palm-oil, cocoa, ivory, copal, rubber, and cotton are exported. Lagos, the capital, is the chief port of the West African palm-oil trade.

Spanish West Africa. Rio de Oro, or the Spanish Sahara, a granite plateau which, with the included territory of Aderar, has an area of 243,000 square miles, is sandy and arid, without vegetation, except in the numerous depressions, and scantily populated.

The most important possession of the Spanish is Fernando Po in the Bight of Biafra, opposite the mouths of the Cross and Kamerun rivers. The island is volcanic, having its summit in the extinct crater of Clarence Peak, 9,350 feet above the sea. Santa Isabel, on the north coast, is the only town. The climate is insalubrious to Europeans. Cinchona, coffee, cotton, tobacco, sugar-cane, maize, rice, and the manioc, yam, and banana thrive satisfactorily, but the exports are small. The aborigines are Bantus of the Bubi tribe. Its area, with that of Annobon, which lies to the southwest, is 750 square miles.

The territory of Rio Muni on the Gulf of Guinea, formerly claimed by France, was conceded by treaty of 1900 to Spain. It is a swampy and forested region, with a number of trading stations but no good harbors or towns. The area is 9,800 square miles.

BEACH AT CAPE COAST CASTLE

With a fairly good anchorage, sheltered by a reef, the town of Cape Coast Castl is one of the important commercial ports of Guinea, and the gateway for traffic with the interior kingdom of Ashanti. The town itself is extensive, owing to the large negro population that has gathered here. At this point the coast is hilly and somewhat less unhealthful than are most of the Guinea ports.

Kamerun and Togo-land. Two separated areas on the Gulf of Guinea belong to Germany. The Kamerun region, the greater of the two, lies west of the French Congo and extends from the Bight of Biafra into the interior as far as the shores of Lake Chad, having an area of about 191,000 square miles. It is mainly upland. In the eastern part are wide, grassy plains that become undulating as they extend westward. In the western portion are mountain chains covered with vast forests. The volcanic area of the northwest rises in Mongo

Ma Loba peak to a height of 12,480 feet. Along the coast is a narrow and unhealthful lowland broken by estuaries forming fine harbors. The climate alternates with rainy and dry seasons, varied by tornadoes. The principal exports are palm-oil and kernels, kola-nuts, copal, copra, ebony, cacao, with limited quantities of ivory and rubber. Gold and iron deposits have been located but are yet unworked. Duala is the capital and seaport. Victoria and Campo are also ports. A railroad connecting Victoria with the interior is under construction.

CANOE ON BONNY RIVER

The head men of the palm-oil coast of Nigeria affect much style. The carved canoe of a really great man, with a brilliant umbrella as a symbol of the chieftain's power, is a gorgeous sight.

CHIEF'S PALACE, NIGERIA

The palace of the monarch of Ida, in Nigeria, is not especially awesome to a person from over-sea. Ida was once the greatest slave-selling State of the Guinea coast, but that glory has gone forever, thanks to the efforts of European navies. The dusky potentate who once sold men as chattels is now reduced to barter in palm-oil.

Togo-land is a region of 33,000 square miles west of Dahome, having a coast line of thirty-two miles. The ocean front has the usual narrow lowland characteristic of Guinea, but instead of swamps it tends to sandy lagoon formations, making it more valuable for commerce. The resources of the country are undeveloped. The chief town is Lome, the capital. Little Popo, Lisoka, Togo, and Yendi are trading points.

German Southwest Africa. Between Portuguese Angola and the Cape Colony is an immense region of about 384,000 square miles held by the Germans. East of the coast range, which rises in Mount Omatako to a height of 8,500 feet and forms the western edge of the Kalahari plateau, is an area of undulating plains that become level as they extend eastward and shade into the Kalahari desert. At the northeast a strip of territory extends to the Zambezi River to allow an eastern outlet of trade. Water is scarce. The rivers are variable in volume, and none of the streams are navigable from the sea. In climate the coast is foggy and cold. On the plateau the air is dry and bracing, with warm days and cold nights. The natural resources include great grazing lands. Gold and copper deposits exist, but are practically untouched, although concessions have been granted and experimental openings made in the Tsumeh copper fields. The natives own vast herds of cattle and export some hides. Agriculture is getting a foothold, aided by government irrigation projects, and there is a small annual immigration of German colonists. Cotton, wines, tobacco, and vegetables are being grown. The native tribes are Hottentots and Bushmen in the west and Bantu tribes of Hereros and Ovampos in the east, all non-Christian. Windhoek, the seat of government, Swakopmund, the seaport, and Keetmanshoop, the mining center, are the chief places. From Swakopmund a railway extends into the interior. Sandwich Harbor and Angra Pequeña are used as ports, but harbor facilities are poor at these places. German garrisons are maintained in the region to keep the warlike native tribes in subjection.

MAIN STREET, ST. HELENA

The lonely island where the great Napoleon dragged out his years of captivity is a quiet place. Its capital, Jamestown, is a neat little settlement extending along a wide avenue which reaches from the boat landing far up the hillside. The garrison buildings, with their wide verandas, one above another, are among the more prominent features of the street.

A ST. HELENA RELIC

The alarm-gun that was fired whenever strange vessels came near, during Napoleon's captivity, is kept on the island as a relic of the French Emperor's stay.

Portuguese West Africa. Angola is a Portuguese dependency. With it is included the small district of Kabinda, lying a little north of the Congo mouth. The plateau region of the interior has grassy plains and undulating hills with forests. Toward the southeast is an arid region contiguous to the Kalahari desert.

The resources include copper, iron, gold, petroleum, and salt. Coffee, rubber, wax, vegetable oils, cocoanuts, cotton, and ivory are exported, while sugar-cane and tobacco are produced for local consumption. The chief places of commerce are Loanda, the capital, Mossamedes, seaport town, Benguela, and Ambriz.

Portuguese West Africa also includes Portuguese Guinea and the islands of St. Thomas (São Thome) and Principe (Princes). Portuguese Guinea (area about 13,000 square miles) is on the Atlantic Coast about seventy-five miles south of the Gambia River. It embraces the adjacent archipelago of Bissagos, including the island of Bolama, on which is situated the capital of the same name. It is an agricultural and commercial colony. The exports are mainly rubber, wax, hides, and oil-seeds. St. Thomas and Principe (area about 500 square miles), situated near the equator southwest of the Bight of Biafra, are hilly. The islands have a rich volcanic soil which yields cacao, sugar-cane, vanilla, and coffee.

St. Helena. The island of St. Helena, famous as the place of exile and death of the great Napoleon, is an isolated volcanic cone situated in the South Atlantic Ocean about 1,200 miles off the African coast. It has an area of forty-seven square miles. A permanent British garrison is kept on the island. The surface, culminating in Diana Peak (2,700 feet), consists of rugged ridges and plateaus. Not more than one-fifth of the land is cultivable. The fisheries are important. There is one good natural harbor, where is located the chief settlement, Jamestown. Since the opening of the Suez Canal in 1869 the island has lost its former importance as a port of call, but it still retains a strategic value as a coaling station.

The island of Ascension (area thirty-five square miles) is a fortified naval station in the ocean, about 800 miles northwest of St. Helena. It is entirely of volcanic origin. The population consists solely of the members of the naval establishment, with their families and dependents. Georgetown, on the northeast coast, is the garrison station. Tristan da Cunha is the chief island of a small volcanic group in 37° 6′ S. lat., half way between the Cape Colony and South America. Formerly it was a garrison station, but is now inhabited only by some shipwrecked families, who maintain themselves by farming and raising cattle.

AUSTRALIA

AUSTRALIA is now the political designation of a great Commonwealth nearly as large as the United States, embracing the islands of Australia and Tasmania. On January 1, 1901, the Commonwealth was inaugurated, comprising the States of New South Wales, Victoria, Queensland, South Australia, Western Australia, and Tasmania, and embracing a total area of about 2,973,000 square miles. In the government the Crown is represented, as in Canada, by a Governor-General, his powers being exercised with the advice of a Cabinet or Executive Council of seven ministers of State headed by the leader of the dominant political party and directly responsible to Parliament. Parliament consists of two chambers, a Senate, elected for six years, in which each of the States has an equal representation that may be increased with the expansion of population, and a House of Representatives, elected for three years by popular franchise.

THE GOVERNOR-GENERAL

Henry Stafford Northcote, Baron Northcote, born 1846, has had a long career in the British public service. For several years Governor of Bombay, he is well fitted for the duties of Australian viceroy.

Surface and Climate. In surface configuration Australia may be divided into three parts, an eastern highland of about 2,000 feet average elevation, a western highland attaining about 1,000 feet, and between them a central area of depression. The eastern highland culminates in the Australian Alps in Victoria and New South Wales, which have an average elevation of 5,000 feet, reaching over 7,000 feet in Mounts Hotham and Kosciusko. The most conspicuous range of the interior of Australia is the Flinders. Back of the eastern highland lie the fertile and well-watered slopes forming the great pasture land of Australia, the most permanent source of wealth. The western highland is a region of low plateaus with occasional short ranges of mountains not over 3,800 feet above sea-level. Large areas consist of sandy and stony desert without any real river systems, covered with spinifex and containing numerous salt-marshes. The coastal slope on the north is broad, terraced, and intersected by large but not permanent rivers. At the southwest the western highland rises into an elevated region of very valuable forests and farm lands.

The only river system worthy of the name is formed by the Murray and its tributaries, the Darling, Murrumbidgee, and Lachlan rivers, flowing down from the eastern highland. Owing to irregularity of rains, most of the other rivers of Australia have no permanent existence and in seasons of drought are transformed into a series of disconnected, shallow pools or lakes. East and southeast of the mountains of the eastern highland the rivers, although short, are well supplied with water and are usually navigable for small coasting vessels for some distance from their mouths.

The climate of Australia is generally milder than that of corresponding latitudes in the Northern Hemisphere. During summer, however, hot winds sometimes prevail and there are periodical droughts in the interior, while the winters are subject to heavy rains. The seasons are the reverse of those in the Northern Temperate Zone, December being midsummer and June midwinter.

ROYAL MINT, MELBOURNE

Because of the enormous gold output of Australia the British government has established branch mints at Melbourne and Sydney, at which gold coins are struck for the great commerce of the British Empire. The Melbourne building occupies a large open space near the business district.

Flora and Fauna. The flora of Australia, although akin in some of its species to those of South Africa and South America, is in general of a very exceptional character. The most characteristic trees are of the genus *Eucalyptus*, some reaching nearly 500 feet in height, the tallest trees in the world. Acacias abound, and species of myrtle, swamp-oak, grass-tree, conifers, palms, cycads, ferns, sedges, baobab, bottle-tree, and mistletoe. The "giant lily," with flower-stalks thirty feet high, and the gorgeous "waratah," with bright crimson flower-heads, are visible at long distances. The coast regions and much of the interior are covered with valuable grasses. The sandy plains of the interior are largely covered with spinifex or porcupine grass, whose barbs are the dread of the explorer.

In its fauna Australia differs from all other continents as greatly as in its flora. Animals not only are comparatively few in species and numbers but are of a quaint and unusual type, many being peculiar to the continent. Kangaroos, phalangers, wallabies, wombats, and other marsupials are the principal mammals and are without representation elsewhere except in the opossums of America. There are two genera of monotremes, or egg-laying mammals, the platypus, or duck mole, and the echidna or porcupine ant-eater. Of birds there are over 630 species, ranging in size from the emu or Australian ostrich to the wren. The black swan, lyre-bird, cassowary, honey-sucker, bower-bird, and bush turkey are peculiar to the country. Crocodiles and lizards abound in the tropical districts.

COLLINS STREET, MELBOURNE

Among the principal thoroughfares of the Australian capital is Collins Street, famous for its banking institutions and, locally, for its colony of physicians at one end of its extent. Some of its buildings devoted to business uses are palatial in appearance and in size.

Resources and Trade. Australia is the greatest wool-producing country in the world and that commodity, largely merino of a superior quality, is the great staple of export. As sheep-grazing is less dependent upon rainfall than other pastoral pursuits, the great steppe-like, grass-covered region between the mountains of the eastern highland and the desert of the western plateau is particularly adapted to that industry. There are extensive sugar plantations worked by imported Polynesian labor, and cotton is also successfully grown. On the cooler and drier farm lands of the south the main products are wheat and the grape. Maize, barley, and

oats are generally grown. Potatoes yield abundantly. Nearly all the valuable fruit-trees of Europe and many belonging to tropical and semi-tropical climates have been introduced with great success.

Australia abounds in mineral resources, especially in gold, which was discovered in New South Wales in May, 1851, and has since been found in all the states. New South Wales has at Broken Hill one of the richest silver mines in the world. Coal deposits are found in New South Wales, Queensland, Victoria, and Tasmania. Tasmania and South Australia are known for their rich copper mines. Tin mines of great value have been opened in Northern Queensland and New South Wales and tin forms the main wealth of Tasmania. Large and valuable deposits of iron ore occur in New South Wales, and Tasmania. For manufactures Australia depends to a large extent upon Great Britain and the United States, but factories are multiplying. The chief exports from Australia are wool, hides and skins, frozen and preserved meats, butter and cheese, gums, coal, gold, copper, tin, other metals, wheat and flour.

THE TOWN HALL AT SYDNEY

In the municipal building of Sydney is one of the largest halls of the world, easily accommodating 5,000 persons. Its designer was not superstitious, for it is built over an old cemetery and has thirteen doors of exit. In the hall is a splendid organ, said to be the most complete in the world. It has six key-boards, 126 stops, and 8,756 metal pipes.

New South Wales. With an area of 310,700 square miles, New South Wales is nearly twice as large as the New England and Middle States combined. The Great Dividing Range of Australia traverses the State from north to south at a distance of from 30 to 120 miles from the sea in broken ridges known under various names. The coastal strip is a well-watered and fertile area of about 50,000 square miles. The chief pastoral districts of the State lie west of the mountain ranges and consist of elevated table-lands and undulating plains drained in the north by the Darling River, navigable in rainy seasons for 1,700 miles, and in the south by the Murrumbidgee River and its tributaries. All of these streams empty into the sea through the Murray River, the only outlet for a drainage area of over 300,000 square miles. All of them stop flowing in dry seasons. The table-lands and interior plains are largely covered with open forests of Eucalyptus and other trees, and in the southwest large areas are covered with stunted bushes or mallee-scrub. Brush forests cover a large part of the coastal region, the valleys being filled with a great variety of timber trees.

Agriculture and wool growing are the chief industries. Large quantities of wheat, maize, and other grains are grown. Potatoes, sugar-cane, tobacco (for sheep-washing), wine, and oranges and other fruits are also produced extensively. The chief productions, however, are wool and other animal products. Gold was discovered in 1851, and silver also is mined. The coal-fields in the coastal region produce heavily. Sydney, the capital, well built and beautifully situated, has a magnificent harbor and is the chief seaport of the State. Parramatta is noted for its orchards and orangeries. Newcastle is the greatest coal-mining center of the Southern Hemisphere.

Victoria. The State of Victoria is the most densely populated, With an area of 87,884 square miles, it is one-third larger than New England. Its coast line measures about 700 miles. The State is traversed by the southern ranges of the eastern highland, various spurs of which divide the country into several basins, which are well watered except in the northwest. The southwestern district is volcanic, showing many extinct craters, and there are numerous lakes, both salt and fresh. The soil is very fertile. Grass-covered hills, plains, and valleys afford excellent pasturage. The climate is more temperate than elsewhere in Australia, the mean yearly temperature being 57°. On the elevated slopes are large forests of hard wood, chiefly Eucalyptus.

Victoria is the principal manufacturing and, next to Western Australia, the chief gold-producing State of Australia. Copper, tin, and antimony also occur. Coal is extensively mined in the southeast. Other staple products are wool of the finest quality, meat, hides, butter and cheese, horses and other live stock, wheat, oats, potatoes, timber, tan-bark, tobacco, hops, fruits, and wine, all of which are exported. Melbourne, the capital, situated on the Yarra Yarra and Saltwater rivers near the head of Port Phillip, includes with its suburbs an area of over 200 square miles, and is the third most populous city in the Southern Hemisphere.

WATER FRONT, NORTH SYDNEY

One of the suburbs of the city of Sydney is the little town of North Sydney, located on Lavender Bay just across Port Jackson. It is the terminus of an important railway line and from its ferry-house on the shores of the bay it is in constant touch with the activities of its big neighbor.

WOOL TEAMS, DARLING DISTRICT, NEW SOUTH WALES

With a climate particularly adapted to sheep raising the great plains of New South Wales that stretch away from the waters of the Darling River are especially notable commercially. After the shearing of the flocks, which takes place about August, the wool is massed into great bales by hydraulic presses and then sent to town warehouses. The procession of wagons, each loaded so heavily that several yokes of oxen are needed to draw it, is a picturesque sight as it moves slowly into a settlement.

Queensland. The State of Queensland comprises an area of 668,497 square miles. The coast is protected on the east by the Great Barrier Reef, inclosing a navigable channel about 1,000 miles long and from ten to thirty miles wide. The surface is amply diversified by

ADELAIDE, FROM ACROSS THE TORRENS

The South Australian city of Adelaide is located on a small stream, the Torrens River, which would be quite inadequate for scenic effects were it not dammed below the city to increase its volume. Looking across the river from the north the eye rests upon the park-like extent of the North Terrace, beyond which loom the massive government buildings. Toward the right are the long sheds of the railway station half screened by palms.

mountain spurs thrown out from the Great Dividing Range and by water channels. On the seaward slope are a number of well-defined small river systems, the Brisbane, Burnett, Fitzroy, and others. The southwestern slope is drained by numerous tributaries of the Murray-Darling River. The climate of Queensland in general is moist and hot on the Pacific slope, and dry and hot in the western interior. The rainfall is very unequal, copious on the coast and scanty westward.

Forests cover about one-half of the surface of the State. Red cedar, cypress, and pine furnish the most useful timbers, and are intermingled with palms, bamboos, caper-trees, and ferns. The Bidwill pine, turpentine, bottle, silky oak, Queensland nut, and several other useful trees are also found. Wild rice, tobacco, and indigo cover large tracts. Several indigenous species of banana and citrus, with figs, grapes, and other fruits, are abundant in the State.

About two-thirds of the area of the State is leased for sheep and cattle runs, and there are also considerable areas leased for the mining of gold, silver, copper, and tin. The boring of artesian wells is proving highly efficient in overcoming the effects of scanty rainfall in the western districts. Wool and other animal products, live stock, metals, sugar, timber, shells, fruit, oysters, and trepang are the principal exports. Brisbane, the capital, thrives because located near to the rich pastoral and agricultural lands of the Darling Downs.

South Australia. South Australia has an area of about 903,700 square miles, greater than that of the United States east of the Mississippi River. It extends north and south across the center of the continent from ocean to ocean. The most fertile portion of the State is in the southeast, where the surface is diversified by ranges of hills extending generally north and south. In the southern part of the State are depressed areas containing numerous salt lakes. The northern coastal districts are well watered by the Victoria, Daly, Adelaide, and other rivers. The climate of the southern and settled portion of the State resembles that of Southern France. Hydraulic works and artesian wells have been constructed and render many semi-arid districts independent of the uncertain rainfall.

Forests cover more than 12,000 acres. Mallee-scrub prevails more or less over the State, with salt bush and tropical grasses and sedges in the northern districts, mangroves on the northern coast, and dense thickets of paper-bark trees in the river basins. The chief industries are agriculture and the breeding of sheep, horses, and cattle. Wheat is the principal crop and is largely exported. Copper is the principal mineral product. South Australia has only one large city, Adelaide, the capital, on the Torrens River. Palmerston, on the fine harbor of Port Darwin, is the northern terminus of the projected transcontinental railway.

Western Australia. Western Australia comprises all of the continent west of the meridian of 129° E., having an area of about 976,000 square miles, or about one-fourth that of Europe. The inhabited portion of the State extends along the western coast about 1,200 miles, but miners have penetrated over 500 miles into the interior. Aborigines are found in the Kimberley mining district and in the hilly country of the northwest.

East of the meridian of 121° E. a grass-covered but unsettled table-land extends inland about 200 miles. West of that meridian the southwestern portion of the State is largely covered with valuable forests. The channels of most of the rivers of the western coast north of 30° S. lat. are filled only during the wet season. South of 30° S. lat. the Swan River is the principal stream. The most thickly settled portion of the State is the rich farming and wine-growing district in the southwest. The principal mountain range is the Darling, 1,500 feet elevation, skirting the southwestern coast for 300 miles. Various ranges parallel the western coast at from 200 to 300 miles inland. A great part of the far interior consists of barren, sandy table-land and uninhabitable, stony plains.

THE JENOLAN CAVES, NEW SOUTH WALES

In 1841, the story goes, an outlaw of the Fish River Valley was hunted to his lair, which proved to be the narrow entrance of a cave in a hillside. Entering the outlaw's den, his captors were astonished to find themselves in a vast chamber from whose sides and roof hung sheets of snowy stalactites and masses of glittering crystal. Exploration has since shown a series of caves in whose depths are places of surpassing beauty. The Ballroom, from which steps lead upward to the Arch caves, is an especially striking portion of the series.

The extensive sandy plains of the State were formerly deemed useless for agriculture, but investigation has shown that with irrigation and scientific treatment these sandy districts can be made very fertile. Capital is reclaiming large areas for cultivation. The climate is variable, but on the whole healthful. The heat is intense, but the air inland is dry.

Gold-fields, covering a vast area in the interior, extend in an almost unbroken belt from Kimberley in the north to Dundas in the south. Western Australia leads all the other States of the Commonwealth in gold production. Besides gold the chief products of the State are wool, jarrah and karri timber, sandalwood, pearls and pearl shells, metals, coal, wheat and other cereals, horses, cattle, kangaroo skins, guano, fruits, and wine. Apples, pears, peaches, nectarines, apricots, plums, figs, almonds, bananas, olives, oranges, grapes, and strawberries are grown in the State with success. Perth, the capital, is on the Swan River. Coolgardie and Kalgoorlie are active mining centers. Fremantle is the chief seaport. Plans have been formed to give Fremantle rank as one of the great deep-water ports of the Pacific Ocean. Two great moles have been extended out from each side of the river entrance, making a large harbor with 123 acres area. This haven has been dredged to a uniform depth of thirty feet. Since 1899 Fremantle has been a port of call for the ocean mail steamers.

LAUNCESTON, TASMANIA

Although forty miles inland Launceston has the smaller ocean craft brought to its wharves by the Tamar River and is a real seaport. The best view of the city is from near the bridge that crosses the South Esk River. From here the city lies at the right and the Tamar, formed at this point by the South Esk and North Esk, stretches away to the left.

CATARACT GORGE AT LAUNCESTON

Just above the city the South Esk River, hurrying to its junction with the North Esk, passes swiftly through a rocky ravine and over a broken ledge that forms a strikingly beautiful waterfall. The Gorge, as the ravine is called, has been turned into a pubtic park, and has been provided with well-kept walks. It is the favorite recreation spot of Launceston people and is claimed to be one of the most striking bits of natural scenery in Tasmania.

Tasmania. The State of Tasmania comprises the island of that name, with King Island, the Furneaux Group, and the Macquarie Islands. Its area is about 26,200 square miles. The surface of the island is in the main a well-wooded highland region. The eastern coast is skirted by a series of ranges. Large tracts in this section and in the center of the island are covered with a fertile soil of decomposed lava resulting from volcanic action. The central plateau affords a large extent of fine pasture. The richest soil of the island is that where the thick forest growths are found. Here settlement is progressing and the clearing of the land has brought into use some marvelously productive acreage. The central section is mainly a plateau of about 3,000 feet elevation, dominated by isolated mountain spurs, including Cradle Mountain, the highest peak in the island. The climate of Tasmania is the most temperate of the Australian States, resembling that of Southern England. The heat is modified by prevailing westerly winds. Only on the bare, treeless table-land of the central region, exposed to the cold westerly hurricanes and icy south winds, is the climate unduly severe.

The forests are very extensive and yield beautiful cabinet woods and timbers of the largest size. Eucalyptus is the dominating type of tree, but the huon pine abounds in the south. Mining, sheep and cattle breeding, and farming are the staple industries. Most of the European fruits, grains, and vegetables can be cultivated with success. Tasmanian wheat and barley long have been held in high repute by consumers in the neighboring Australian States. Fruit, fresh and preserved, constitutes the leading agricultural export. Timber also is exported. There are extensive tin mines in the north and silver mines on the western coast. Gold, copper, iron, antimony, bismuth, slate, marble, and building stone are other mineral products, and coal is widely distributed. There is an oyster-raising area on the eastern coast that has attained considerable commercial importance.

A SHADY LAGOON, NEW SOUTH WALES

NEW ZEALAND AND FIJI

NEW ZEALAND lies about 1,200 miles southeast of Australia. The main islands, three in number, form a long, narrow, irregular chain. The dependencies of New Zealand are the Kermadec, Chatham, Auckland, Campbell, Bounty, Antipodes, Cook or Hervey, Penrhyn, Savage, and Suvaroff groups. The

MOUNT ROLLESTON

From the road that extends along the west coast of Middle Island from the Haast River to the town of Ross may be seen Mount Rolleston, a towering, cloud-capped mountain mass near Hokitika, covered with primitive forests.

total area of the Colony, which is estimated at 104,471 square miles, is slightly smaller than that of Italy.

The powers of government are vested in a Governor appointed by the Crown, assisted by a Cabinet and a bicameral General Assembly. Primary education is free, secular, and compulsory. Higher education is provided by endowed academies. The Government has inaugurated several interesting experiments in legislation of a socialistic character, including State life insurance, public administration of estates, State loans to settlers, old-age pensions, and laws affecting the interests of wage earners.

Physiography. North Island projects to the northwest above the city of Auckland in a peninsula abounding in fertile valleys, while the main portion of the island is varied by low-lying table-lands and by hilly ranges culminating here and there in lofty volcanic peaks. Forests are luxuriant except in the central volcanic lake and hot spring district, in the open grass-lands of the eastern section, and in the southern extremity of the island. South of Lake Taupo is a wide highland region forming the main watershed of the island, culminating in the active volcanoes Ruapehu (9,250 feet) and Tongariro. At the western entrance to Cook Strait stands the solitary snow-clad cone of Mount Egmont or Taranaki (8,270 feet), an extinct volcano on which the snow-line is 2,000 feet lower than in the corresponding latitudes in Europe. The eastern coast in its northern portion contains several fine harbors. The rivers of New Zealand, flowing from high lands to the sea by a rapid incline, are subject to sudden floods. The Waikato River in North Island is navigable for a great part of its course. The Clutha River, the principal stream of South Island, is not navigable.

The system of parallel mountain ranges that form the backbone of North Island traverses at greater elevation the length of South or Middle Island near its western coast, culminating in lofty peaks. In this region are glaciers larger than those of Switzerland, supplying the lakes of the great southern table-land. North of the Waitaki River lies the region of the Canterbury Plains, an undulating district intersected by mountain streams. The mountainous region of the western coast is indented in its southern portion by deep fiords similar to those of Norway; the northeastern seaboard on Cook Strait has many small inlets; while the eastern coast on the whole is a low, straight, shingly beach offering few good harbors. The rugged, densely forested western half of the island is unsuited to agriculture. Stewart Island is forested throughout.

Climate, Flora, and Fauna. Situated in the belt of warm, constant westerly winds, New Zealand has a healthful climate. All English flowers, fruits, and edibles are cultivated, and in North Island oranges and lemons. The western half of the islands is largely covered with evergreen forests, chiefly of pine but containing also beeches and other trees, varied with lianas, flowering creepers, a single species of palm, and many gigantic species of fern. Imported willows, poplars, Eucalyptus, and California pines have been planted. Large portions of the eastern half of the islands are open country covered with the native flax or with wiry grasses. The most valuable natural productions are the huge kauri-pine found only in the northern half of North Island and much valued for shipbuilding and for its resin, and the native flax or phormium used in the manufacture of rope and twine. The native fauna includes a species of rat with mouse-like ears, bats, lizards, frogs, and

THE WHARF AT AUCKLAND

The seaport city of Auckland is one of the important points of Pacific Ocean commerce. It is located on the south shore of Waitemata harbor and on an isthmus which separates it from the shallower Manukau harbor only six miles away. Waitemata harbor is well sheltered and unusually deep, the largest sea-going vessels being able to unload at its wharves. The mail steamers between San Francisco and Australia make Auckland a place of call and its own export industries enlarge trade.

numerous varieties of birds. Imported animals include pigs, deer, and rabbits.

Industries and Trade. Stock-raising, agriculture, and allied industries are the main sources of wealth. Other important industries include the mining of gold and coal, timber cutting, kauri-gum digging, manufactures of tiles, furniture, iron goods, and machinery. Silver, antimony, and manganese are mined. There are many butter and cheese factories. The chief exports are wool, frozen meat, gold, grain, butter and cheese, hides and skins, tallow, kauri-gum, and phormium. Animal products constitute about two-thirds of the exports of the Colony. Sheep raising is extensively carried on and New Zealand mutton is regarded in England as the best that is received there. Imports include cloths and clothing, iron and steel goods, machinery, sugar, paper and its manufactures, liquors, fruit, oils, tobacco, tea, bags, and coal. Wellington, the capital of the Colony since 1865; Auckland, the former capital; Christchurch, an inland city on the rich farming and sheep-growing Canterbury Plains; and Dunedin, a manufacturing city, are important places.

BULLOCK TEAM IN THE KAURI-PINES

In the extreme northern part of North Island are forests of the kauri-pine, a tree that grows nowhere but in New Zealand. Most of the kauri-gum exported from the Colony is found underground where it has been deposited by forests now long disappeared, but the living trees are still a source of treasure and are carefully worked. Bullock teams are used to drag the felled trees over the heavy clayey soil.

FIJI

The British Crown Colony of Fiji is a group of over 250 islands and islets of which about eighty are inhabited, lying 1,100 miles north of New Zealand and 2,000 miles east of Australia. The island of Rotuma has been a dependency since 1881. The total area is about 8,000 square miles. The Fijians belong to the brown-skinned Polynesian race, well built, handsome, and intelligent.

Surface Features. The islands are largely of the lofty volcanic type, well wooded, most of them being surrounded by barrier reefs crossed by deep navigable channels. Earthquakes causing disastrous tidal waves are not uncommon. The larger islands culminate in peaks of about 4,000 feet elevation, giving rise to streams that supply water for irrigation, and the scenery is often grand and picturesque. Vegetation is remarkably luxuriant, especially on the southeastern side of the islands where the trade-winds bring an abundant rainfall. The climate is warm but equable and well adapted for Europeans. The wet season, from October to May, is warm, with severe hurricanes during January and February. Equatorial heat, in Fiji, is tempered by cool sea breezes.

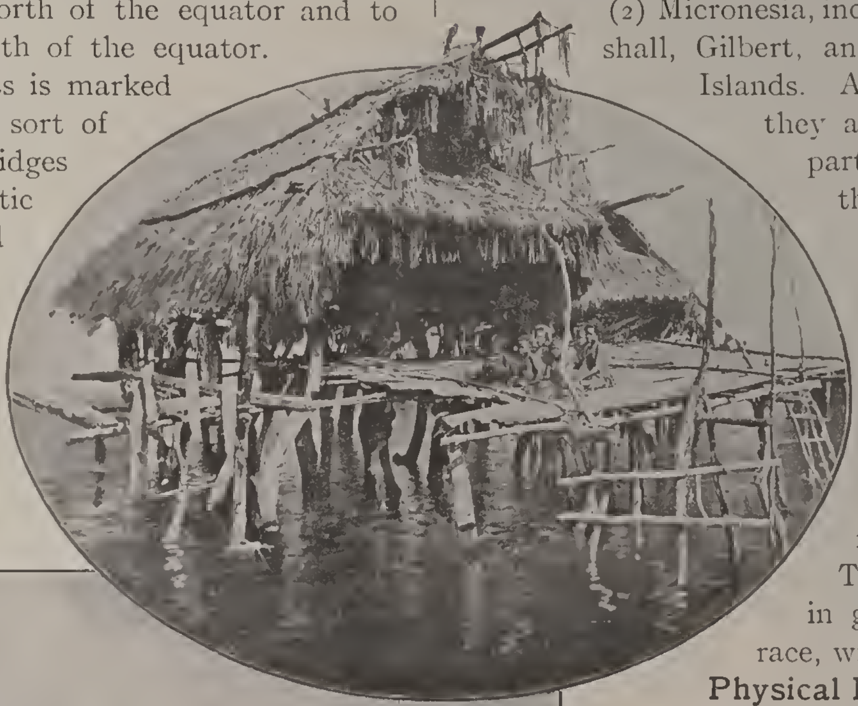
Products. Breadfruit, cocoanuts, bananas, pineapples, peanuts, sugar-cane, rice, cotton, tea, maize, tobacco, and vanilla flourish. The yam and the taro are the staple food of the natives. There are extensive plantations of sugar-cane, worked in part by imported labor. Tortoise and pearl shells are obtained on the reefs, and trepang or bêche-de-mer and fish off the coast. Horses, cattle, sheep, and Angora goats are successfully raised and cattle run wild. Besides the agricultural and fishing industries there are sugar-mills, distilleries, boatbuilding yards, soap-works, and sawmills, besides one tea-drying establishment. Exports are chiefly sugar, copra, fruit, distilled spirits, peanuts, pearl shells, bêche-de-mer, maize, and vanilla.

VIEW OF LAKE WANAKA FROM PEMBROKE, MIDDLE ISLAND

In Middle Island lies a picturesque lake region usually visited by tourists because of the beauty of its scenery. Lake Wanaka is one of the bodies of water here located. It extends twenty-nine miles through a valley between the mountains, sometimes broadening to three miles, but usually narrower. Around it rise conical hills clothed with luxuriant verdure, and between them are picturesque ravines from which issue sparkling torrents whose sources are in the hilltops. Many small islands break the even level of the lake's surface.

PACIFIC ISLANDS

THE PACIFIC is an ocean of great depth, generally exceeding 2,000 fathoms from a short distance off the American coast west to about 125° E. long. north of the equator and to about the meridian of 180° south of the equator. As the surface contour of the continents is marked by elevations that follow some general sort of system, so the ocean-bed is traversed by ridges that are often of the proportion of gigantic mountain chains. Some of the submerged peaks of the Pacific, were their bases raised to sea-level, would tower heavenward many thousand feet above the highest of the Himálaya Mountains.



Ocean Ridges. Two of these ridges emerge from the waters of the mid-Pacific Ocean in the latitudes,

FISHING VILLAGE, NEW GUINEA

All through the islands of Malaysia, and as far east as the Bismarck Archipelago, may be found occasional native settlements built over the shallow waters of sheltered bays. Here live the fishing tribes, expert boatmen, and usually expert pirates as well when foreign gunboats are not too near. The curious huts are rudely constructed, but are, nevertheless, durable and safe from the ordinary dangers of the tropic shore.

respectively, of the northern and the southern tropics. The northern chain crosses the Tropic of Cancer from northwest to southeast, ending in the volcanic islands of Hawaii. The southern chain, much longer and edged by parallel ridges, extends eastward along the Tropic of Capricorn from the Society and Cook islands to the innumerable atolls of the Tuamotu group. In south tropical latitudes west of the meridian of 170° W. the depth of the Pacific Ocean decreases as it approaches Australia and the continental shelf of Asia marked by the islands of the Malay Archipelago. From this area of lesser ocean depth rise two well-marked ridges, the summits of these elevations forming islands, singly or in lines. These chains of high land conform in a general way to the outline of two concentric arcs, convex to the northwest and curving nearly parallel to the Australian coast. The inner chain, known as Melanesia, curves southeastward from New Guinea to New Caledonia with an outlier in Fiji, although the Fiji group is by some regarded as belonging to the outer chain. The latter ridge, known as Micronesia, curves from the Tonga Islands, northeast of New Zealand, northward to the Samoa Islands, thence northwestward through the Ellice and Gilbert groups to the Marshall Islands, and thence westward through the Carolines to the Pelew group, with a northern branch extending to the Marianne or Ladrone Islands.

Groups and Islands. The islands of Oceania are thus most conveniently divided into three main groups, which, with their chief component islands, are as follows:

(1) Melanesia, including New Guinea, the Admiralty Islands, Bismarck Archipelago, Solomon Islands, Santa Cruz Islands, New Hebrides Islands, Loyalty Islands, New Caledonia, and Fiji. The Melanesian Islands are mainly of the high or mountainous class, fertile, and with a warm, moist climate. They are occupied by people of the Papuan race, mixed in the west with the Malay and in the east with the Polynesian stock. Some of the islands are actively volcanic and many are surrounded by coral reefs of considerable extent.

(2) Micronesia, including the Marianne, Pelew, Caroline, Marshall, Gilbert, and Ellice groups, Samoa, and the Tonga Islands. All of the islands in this division are small; they are partly volcanic and mountainous and partly low and coralline. In them generally the mixture of races is more apparent than in the other great divisions of Oceania.

(3) Polynesia, including the northern and southern tropical chains and the scattered groups. In the northern tropical chain lie the Hawaiian Islands. The southern double tropical chain includes the Cook and the Tubuai or Austral islands, the Society group, and the islands of the Tuamotu Archipelago. These islands, whether volcanic or coral, are in general inhabited by the true Polynesian race, without apparent admixture of other blood.

Physical Features. Divided on a basis of physical conformation, the islands of Oceania belong to one or the other of the two great classes of islands, the high or volcanic and the low or coral. Of the high islands few rise to an altitude of less than 4,000 feet; most of them are luxuriantly fertile and clothed with forests.

The low or coral islands, on the other hand, usually rise only a few feet above the surface of the sea, some of them being barren, others scantily clothed with vegetation, among which the cocoanut-palm is most conspicuous. They are of three classes, namely, atolls, barrier reefs, and fringing reefs. An atoll is a ring of coral limestone inclosing a lagoon of considerable depth. The annular strip rarely exceeds one-fourth of a mile in width, but the rings vary in diameter from a few hundred yards to many miles. The inner beach is that on which the harbor and houses are situated. The Caroline Islands and the Tuamotu or Low Archipelago present many excellent examples of this type. In the case of a barrier reef an island rises from the center of the lagoon, separated from the reef by deep water, while the inclosing strip is sometimes broken by the sea into a chain of islets. Fringing reefs, which are found in almost all the groups, differ from the barrier reefs in having no interior deep water channel.

Native Races. The most important native racial elements are the black-skinned Papuans, who have given to Melanesia its name, and the brown-skinned Polynesians found in all the Polynesian groups,

WHARF SCENE, NUMEA, NEW CALEDONIA

For many thousand people who have offended against the laws of France the wharf at Numea is the gateway of a new life, full of opportunities that are denied elsewhere. French genius, guided by modern knowledge, has been very successful in its great penal colony. By well-directed labor the island has been made a valuable commercial possession, and the outcasts of society have been trained into orderly and industrious habits.

in New Zealand, and, less pure, in Micronesia. The Melanesians are almost black and are frizzly-haired, bearded, energetic, impulsive, and often fierce and savage. Cannibalism, formerly almost universal, still prevails here and there among them. They are easily distinguishable from the straight-haired, fairer-skinned Malays, who are supposed by many to be of Mongoloid origin, with whom, as also with the Polynesians, they have mingled to some extent. The Polynesians, akin to the Maoris of New Zealand, are of another stock. They are of a higher order than the negroid Papuans, being large and well built, of amiable disposition and superior intelligence. The complexion is copper-brown of varying shade; the hair long, smooth, dark brown or black, and inclined to curl.

NATIVE HOMES IN MICRONESIA

In the warm regions of the Pacific Ocean, from the Philippines across to Hawaii, the ordinary homes of the natives are flimsy structures roofed with grass or reeds but otherwise open to every breeze. Were it not for the total disregard of drainage ideas these huts would be ideally healthful in a tropical climate, but personal privacy is most woefully lacking.

American Dependencies. The United States possessions in Oceania include the Hawaiian Islands; Midway or Brooks Islands, lying at the northwestern end of the north tropical chain; Wake Island, uninhabited, over 2,000 miles west of Hawaii; the Philippines; Guam, the largest of the Marianne group; the islands of the Samoa group east of the meridian of 171° W. and a number of the so-called "guano islands" in the equatorial region east of the meridian of 180° longitude.

British Dependencies. The southeastern part of New Guinea, with an area of 90,540 square miles, is British territory, ruled by an official at Port Moresby, the chief expense being borne by Queensland, Victoria, and New South Wales. The region is little known. High mountains, with peaks of 13,000 feet, are in the interior, and from them flow streams draining wide alluvial valleys. The climate is hot and unhealthful. Valuable mineral resources probably exist and in its dense forests are cedar, cypress, sandalwood, ebony, oak, rubber, nutmeg, cocoanut, and banana producing vegetation. Present exports are pearls, gold, copra, trepang, sandalwood, and mother-of-pearl. The British Solomon Islands (area 8,357 square miles) are protected territory inhabited by tribes of Melanesian savages.

The New Hebrides (area, about 5,300 square miles) are under the joint protectorate of France and Great Britain. The group is partly volcanic, partly coralline, with fertile soil and dense forests. The Santa Cruz or Queen Charlotte Islands, north of the New Hebrides, have about 360 square miles area.

The Tonga or Friendly Islands (area 390 square miles), lying southeast of Fiji, form a native kingdom under British control, the natives being largely Christianized. Nukualofa is the capital and chief port. The islands are very productive of fruits and field products, but copra is the only important export.

Christmas Island (area 234 square miles), a coral atoll with a desirable anchorage, in longitude 157° 27′ W., is claimed by Great Britain and also by the United States. The Gilbert Islands (area 166 square miles), northward of Fiji, are a fertile coralline group. Fanning Island, north of the equator, is a naval coaling station.

French Dependencies. New Caledonia, a mountainous island of moderate elevation (about 5,400 feet) about 900 miles east of Australia, is a penal colony with 7,700 square miles area. The island is well covered with vegetation, and there are large areas of pasture land. Coffee is the principal product, but stock-raising, fishing, and forest industries are followed. New Caledonia has the largest known deposits of nickel.

A SAMOAN PRINCESS

Before Samoan royalty fell from its high estate, leaving the island kingdom subject to alien flags, the niece of King Mataafa was a person of social distinction in her native land, not less a princess because no gems adorned the tropic simplicity of her attire.

The New Hebrides, under a joint French and English protectorate, lie near to New Caledonia, and are subject to the oversight of the French naval officers of the Pacific fleet. There is a small commerce in forest products. Sandalwood, once an export, has been exhausted.

The Society Islands (area about 630 square miles) are all volcanic and mountainous, well watered, densely wooded, and surrounded by coral reefs. The climate is mild and healthful. The chief commercial products are copra and pearl-shells, but cotton, sugar, rum, vanilla, oranges, cocoanut-oil, and edible fungi are also exported. Tahiti is the capital of French Oceania and a seaport. The Tuamotu Isles include over eighty low coral islands lying east of the Society Islands, with an area of about 330 square miles. The natives are of Polynesian stock, thrifty and industrious. The chief products are copra, pearl-shells, and pearls. The Tubuai Islands (area 110 square miles), southeast of the Cook Islands, comprise seven islands, six of which are volcanic. Tropical products are grown. The Marquesas Islands (area 480 square miles) comprise two groups north of the Tuamotu Archipelago. The chief exports are cotton and edible fungi, the latter for the Chinese market.

German Dependencies. A portion of New Guinea called Kaiser Wilhelm's Land (area about 70,000 square miles) is a German protectorate. There are extensive plantations of coffee, tobacco, cotton, and other field products. Copra, mother-of-pearl, and trepang are gathered by the natives. The town of Herbertshöhe on Neu Pommern Island is the governmental center for both the Bismarck Archipelago and Kaiser Wilhelm's Land.

The Caroline Islands comprise about 700 islands and islets, with a total area of nearly 270 square miles. The islands in general are well wooded and fertile, the chief products being cocoanuts, bread-fruit, bananas, oranges, pineapples, taro, yams, sugar-cane, and cloves. Copra, tortoise-shell, and mother-of-pearl are exported. The natives are of mixed Papuan and Malay stock. The Marshall Islands (area 158 square miles) comprise about thirty coral reefs or atolls. The Marianne or Ladrone Islands comprise ten islands of the high volcanic type, and five of coral formation. The area is about 420 square miles. Copra is the principal article of export.

The Samoa Islands are of volcanic origin and generally surrounded by fringing reefs. The surface is mountainous, attaining 4,300 feet elevation and in many places having steep declivities to the sea, the lofty slopes, especially those facing the south, being well watered and particularly fertile. The climate, although hot, is salubrious and well adapted to Europeans. The fertility of the soil, formed chiefly by the decomposition of volcanic rock, is such that the cultivation of tropical plants yields abundant returns. The most important indigenous trees are the cocoanut, bread-fruit, bamboo, banana, and palm. Important products of Samoa are copra, sugar, coffee, cotton, maize, sweet potatoes, yams, nutmegs, melons, and tropical fruits. Copra and cacao-beans are the chief exports of the islands.

HAWAII–GUAM–TUTUILA

GOV. GEORGE R. CARTER

The territorial executive of Hawaii, who succeeded Governor Dole by presidential appointment, is a native of Hawaii and was previously the territorial secretary. He was educated in New England schools.

THE HAWAIIAN ISLANDS include eight large islands, seven of which are inhabitable, and four small and rocky islets, lying in the North Pacific Ocean and extending in a curve from northwest to southeast, their land area being 6,449 square miles. Their separate areas are: Hawaii, 4,015 square miles; Maui, 728; Oahu, 600; Kauai, 544; Molokai, 261; Lanai, 135; Niihau, 97; and Kahoolawe, 69 square miles. Northwest of these extends a series of reefs and skerries as far as the Midway Islands, over all which the United States holds title.

Volcanoes and Soils. The islands are of volcanic formation and, geologically speaking, are of very recent date. Where volcanic action has long ceased deep ravines have been excavated on the sides of the mountains, especially on the windward side of Hawaii, where the rainfall is unusually great. The coasts are usually steep and uniform, the headlands of the islands often terminating in lofty cliffs, sometimes overhanging the sea to a height of 2,000 feet, affording additional evidence of long quiescence. The volcanic nature of the islands is everywhere apparent. Many hundred square miles of Hawaii are covered with recent and barren lavas. The most prominent physical features of this remarkable group of islands are the volcanoes of Mauna Kea (13,953 feet), quiescent; Mauna Loa (13,760 feet), still active; and Kilauea (4,250 feet), the largest active volcano in the world, the circumference of its oval-shaped crater being nine miles, with a depth of 1,000 feet. All these are on the island of Hawaii. The mountains of the other islands range from 4,000 to 5,000 feet in height, while extinct craters abound, clothed with luxuriant vegetation. Mauna Loa is intermittently active, and Kilauea is in constant eruption.

The soils of the Hawaiian Islands are almost entirely of basaltic lava in various stages of decomposition. The more important islands contain large tracts of fertile land, the most productive of which are the lowlands, where the soils deposited by the action of the rainfall are of great depth and inexhaustible fertility.

Climate and Streams. Owing to varying conditions, due largely to altitude, the climate of Hawaii is remarkably healthful. The variations of temperature, considered in relation to the limited land areas, are extremely great. These variations are due primarily to land altitudes, but also are the result of exposure to moisture-bearing winds. At Honolulu the mean temperature for the year is 73°, the mean of day temperature being 80° and that of night 68°. June is the warmest and January the coldest and rainiest month of the year. Upon the slopes of the mountains the air is perceptibly cooler, and yet everywhere refreshing ocean breezes temper the heat, which is never really oppressive, the northeast trade-winds prevailing for nine months in the year and the leeward coast of the islands being protected by high mountains.

The northeastern coast of the island of Hawaii is watered by numerous streams, usually running at the bottom of deep ravines cut into the side of Mauna Kea; such streams are to be found on other of the larger islands, but they serve chiefly as a means of increasing the fertility of the soil, there being no navigable river that possesses any commercial importance.

Flora and Fauna. The surface in some parts is wild, rugged, and bare, but the valleys abound in tropical plants, and the ravines and many mountain slopes on the windward side of the larger islands are often clothed with forests. Originally, dense growths of valuable timber covered vast sections of the upland plateaus and mountain slopes, but large areas of the wooded tracts have been devastated and laid bare. Naked fields of lava indicate the cause of the desolation in some of the districts. Sandalwood, once an article of commerce, has been exhausted. The island scenery is varied and the flora extensive, about one-half of the species being indigenous to the islands. These forms unite in a peculiar manner the characteristics of the flora of the Asiatic, Australian, and American continents. There are about 130 species of ferns and nearly a thousand varieties of flowering plants. The most notable of the Hawaiian plants include special forms of the tree-ferns, the pandanus or screw-pine, and the koa tree. Jungles of the guava bush form a landscape feature in many localities. The ironwood and silver wattle were introduced from Australia.

In their indigenous fauna the islands are very deficient as regards the larger forms. There are very few indigenous mammals, the wild goats and wild cattle being offspring of domestic stock. Among birds are the kinds found in other Polynesian islands, but altered by long habitat into peculiar species not found elsewhere. Among them are the parrot, owl, skylark, wild turkey, plover, and quail. Serpents are wanting, the only reptile being a small and harmless lizard. The forms of fresh-water and salt-water life are many and varied. The remarkable variety of fresh-water mollusks is of especial interest to scientists.

Resources and Industries. Agriculture is practically the sole industry of Hawaii. About three-quarters of the area under cultivation is devoted to the

THE EXECUTIVE BUILDING AT HONOLULU

The Iolani Palace, completed by King Kalakaua in 1882 as his royal residence, is now the executive headquarters of the territorial government. It is a brick building with cement facing. Formerly its handsomely decorated rooms, finished in polished woods, and its spacious verandas were the gathering places of the friends of native royalty, but now the rooms are devoted to prosaic business uses. Here the daily routine of public service is carried on day after day with American democratic simplicity.

THE HARBOR OF HONOLULU

The Hawaiian capital is a strategic position of great importance to a commercial nation like the United States, because it is a necessary coaling station of Pacific trade and would be an important vantage point for naval operations in event of war with any other power. Its harbor is the only improved anchorage in Hawaii and can shelter 80 to 100 vessels at once. When approached by sea the city is singularly attractive. Nestled at the foot of a mass of picturesque hills, it stretches for three miles along the curved harbor front, nearly concealed by the wealth of green trees that rise above the roofs of the houses. Before it spreads the deep emerald green of the water at the harbor bar, and the general effect is one of tropic beauty and restfulness.

growing of sugar-cane. The sugar industry of Hawaii dates from 1835, when a plantation was started at Koloa, on the island of Kauai, under a royal concession. Export of Hawaiian sugar began in 1837, the first year's total being only $300 in value.

The cultivation of rice is next in importance to that of sugar-cane. It is grown most extensively on the island of Oahu. The Chinese residents are very successful as rice-farmers and they almost have a

KANAKAS WITH CANOES

It is one of the sights of the islands to see the native boats ride the surf at Diamond Head, near Honolulu. Where the giant breakers roll in shore, throwing their spray fifty feet in air, the fearless Hawaiians mount the foamy crests, aided by their outriggers, and ride in safety to the beach. None except a native, inured from childhood to the test, could survive the feat.

monopoly of the work. A dry land or mountain rice has been introduced which bids fair to become profitable. The main staple of the islands, after sugar and rice, is coffee. This has secured a high reputation in the world's commerce, and will probably grow more important yearly, competing with the Brazil product. Corn is the only cereal raised besides rice. Of the minor crops grown, tobacco is the most important. Cotton has been tried, but its culture has not been advanced. Sorghum is grown for fodder. Among vegetables, taro, the great native food-plant, is the most extensively cultivated. Next in importance among the vegetables produced are potatoes. The soil and climate of the Hawaiian Islands are favorable to the production of almost all fruits common to tropical regions. Bananas are raised largely on the island of Oahu. Limes and oranges are also grown, both fruits possessing a peculiarly fine flavor. Pineapples of superior quality are also extensively cultivated for export, and vineyards of promise have been developed by Portuguese residents. The grape product supplies the local market. Among other fruits grown in the islands are lemons, alligator-pears, figs, peaches, loquats, guavas, strawberries, and mangoes. Cocoanuts are also grown and yield good returns. Stock-raising is extensively carried on in the mountainous districts, but is mainly to supply the demand of local consumers. The fisheries of the archipelago are valuable. Official reports state that eighty-eight commercial varieties of fish are offered for sale in Honolulu markets.

The making of sugar is by far the most important manufacturing industry. Next to it in rank is the manufacture of fertilizers. Owing to the demands made by the sugar-producing establishments, the manufacture of foundry and machine-shop products exists at Honolulu. Rice cleaning and polishing is a growing industry. Local needs also support a

TROPICAL ROAD

Wherever the visitor goes in Hawaii, except in the desolate volcanic areas, he finds the same profusion of palms, which overhang rural roadways and shade the wayfarer from the tropic heat of the sun. It is because of the moist ocean winds, keeping damp the rich soil and making an even temperature, that the island is always a vast bower of natural beauty.

RUSTIC BRIDGE AT WAIALUA, OAHU

One of the prettiest spots on the north side of Oahu is Waialua, the terminus of a railroad that crosses the island from Honolulu. Here a hotel has been located close by one of the little streams that intersect the valley and tourists are learning to resort hither because of the cool north winds that temper the tropic climate. The rustic bridge near the hotel is a favorite subject for artists.

growing number of manufacturing plants, such as planing-mills, brick-yards, carriage factories, fruit canneries, and a brewery.

People and Cities. Of the character of the native Hawaiians there is much to be said that is good. They are intelligent, agreeable, industrious, and peaceable. Their rapid advancement in culture within a few generations is a remarkable proof of power to assimilate alien conditions. Besides the Kanakas, there are on the islands great numbers of Chinese and Japanese, most of whom have been imported from their own land as plantation laborers. The Chinese are excellent farmers and form an industrious and prosperous element, holding closely, however, to their own ways of life. The Japanese, more progressive, are inclined to follow American models and take an active part in contact with the ruling Caucasian class.

The city of Honolulu, the capital, is practically the only city in the Hawaiian Islands. Honolulu is the chief seaport and center of commerce and is finely located on the southern coast of the island of Oahu, the best cultivated and most populous and flourishing island of the group. Hilo, a seaport on the east coast of Hawaii, the largest island of the group, is of commercial importance. The approach to the town is pleasing and the bay upon which the town is picturesquely placed is one of the three good harbors in Hawaii. Lahaina, the principal port of the island of Maui, was once, when the whaling industry flourished, considered the leading commercial town of the islands.

LAWN ON KING STREET, HONOLULU

The leading citizens of Honolulu are largely of American blood. Their homes are built after the American style and, though roomy, are modest in appearance. Their scenic setting, however, gives them an elegance of general appearance not possible in a colder clime. The houses are usually surrounded by broad lawns dotted with masses of tropical flowers, and often are approached through avenues of stately palms.

Hawaiian Commerce. The commercial and naval importance of the islands as a dominant factor in developing trade between the East and West and as a strategic base has been long acknowledged. A glance at the group makes clear its importance as a base of supplies or as a half-way station in the Pacific Ocean for vessels engaged in trade between America and Asiatic countries. Without such a depot for supplies it would be practically impossible to carry forward commercial transactions across so vast a space. The predominance of American interests in Hawaii dates from 1820, and, with a single exception, each succeeding administration of the United States Government has looked upon Hawaii as a "commercial outpost of this country" and recognized annexation of the islands as the ultimate sequel to the close relations so long existing between the two countries.

The most notable feature of Hawaiian commerce is the great excess of exports over imports. The exports are almost entirely to the United States and by far the most important item is

RAINBOW FALLS, HILO

Hilo, the second in size of Hawaiian towns, is a stopping place on the road from Honolulu to Kilauea, and is noted for its beautiful scenery. The Rainbow Falls is a cataract embowered in tropical foliage. The native Hawaiians formerly believed it to be the abode of a water-sprite, and when the rainbow appeared they said that she had spread her garments in the sun.

sugar. The leading imports are iron and steel, wood and manufactures of wood, and breadstuffs. In both internal and external means of communication the Hawaiian Islands are greatly favored. Lines of steamers ply between Hawaii and the Pacific ports of America as well as those of Australasia, Japan, and China. There is a total length of 100 miles of railway on the islands of Hawaii, Oahu, and Maui.

GUAM

Guam, the most southerly of the Marianne Islands, is the largest and most populous of the group. In 1898 it was ceded with the Philippine Islands to the United States. The island is thirty-two miles long and about nine miles wide and has an approximate area of 224 square miles. It lies 3,337 miles west by south of Honolulu and about 1,500 miles east of Luzon, thus forming

a connecting link between the United States and its Far Eastern possessions. A government naval coaling station has been established and the island is one of the important landing stations of the American trans-Pacific telegraph cable.

Physical Features. In the northern part of the island is an extensive table-land, thickly covered, except where cleared for ranching purposes, with jungles of pine, pandanus, banian, and breadfruit, and culminating in the peak of Santa Rosa (1,000 feet). The southern part of the island is more mountainous. The arable soil is very fertile, yielding cocoanuts, oranges, lemons, tobacco, sugar cane, beans, tomatoes, and yams. Potatoes, maize, and rice are indigenous, and cacao, coffee, and hemp are cultivated. The chief industry of Guam is the production of copra. The natives also manufacture mats and hats, braided from the long, slender leaf of the pandanus.

CANE FIELD, WAIMENATI, OAHU

On the island of Oahu are some of the largest of the sugar plantations. Toward the close of the year when the cane is ripe the field gangs, armed with their long cane knives, are sent out. Each stalk is sheared of its leaves, then deftly cut, and the fallen masses are placed upon narrow gauge railroads, which center at the sugar mills, sometimes miles away.

A STREET IN HONOLULU

Although not a great many years in the current of modern civilization, the capital of Hawaii has taken upon itself the appearance and conveniences of an up-to-date American city. Broad and well-kept streets are traversed by a modern street car system. At the side of the roadway has been made the customary sidewalk flanked by the yard fence on the one side and a row of shade trees on the other, as is done by Americans at home in New England villages.

The principal towns are Agaña, San Luis d'Apra, Ayat, and Merizo on the western coast, and Ynarajan, Pago, and Ylic on the eastern coast. The most important harbor is Port San Luis d'Apra on the western coast. The Bay of Agaña is obstructed by reefs and is extremely dangerous for ships. Port Tarofofo, on the eastern coast four and one-half miles south of Ylic Bay, is the only harbor besides Port San Luis d'Apra that will receive vessels at all seasons of the year. Into it discharges the Tarofofo River, the only considerable river of Guam. In Ynarajan Bay, a mile farther south, the anchorage is restricted by reefs. Agfayan Bay, a short distance below Port Ynarajan, has good anchorage for vessels of less than fifteen feet draft.

Cable Stations. Like Guam, several other islands of the Northern Pacific belonging to the United States are valued chiefly because adapted for relay stations of trans-Pacific cables, now or to be constructed. Wake Island, 1,320 miles from Guam and 2,040 miles from Honolulu, located in longitude 166° 30′ E., is an uninhabited coral islet scarcely one mile square in area. It is waterless, treeless, and without a harbor. Formal possession was taken in 1899. The Midway Islands, northwest of Hawaii, are a series of three uninhabited sandy islets, the largest of which, in longitude 177° 30′ W., has trees, fresh water, and a fairly good harbor. The American claim of possession dates from 1867. Marcus Island, claimed by both the United States and Japan, is located 810 miles northwest of Wake Island, in longitude 153° 4′ E. It is an excellent station for a branch cable to Yokohama and for coaling steamers. It is covered with vegetation and is said to be inhabited. American discovery dates from 1864.

A TARO SELLER

TUTUILA

Tutuila, by a Navy Department order of February 19, 1900, is the official term for the American dependency formed by the island of that name and six smaller islands. They are a part of the Samoa group in the Southern Pacific, 1,908 miles east of New Zealand and 2,240 miles from Honolulu. American influence in the island dates from 1872 when the ruling chief of the island conceded the use of Pago Pago harbor as an American coaling station. Actual sovereignty dates from 1899, when Germany and the United States assumed control of the group.

Physical Features. Tutuila, the principal island, has an area of sixty-three square miles; Tau or Manua, next in size, has eighteen square miles, and the remainder are mere islets. These islands are volcanic in origin and have two peaks of over 2,300 feet. They are fertile in soil and support a Polynesian population of about 4,000. The value of the islands as a dependency rests on the land-locked harbor of Pago Pago, which is a splendid roadstead invaluable as a strategic center of commerce or naval operations in the Southern Pacific. The government has built warehouses, coal docks, and wharves at the harbor, which will probably be fortified. The natives live under their own tribal system, subject only to the general oversight of the naval officer who is in command at the harbor. The administrative headquarters are near the docks in Pago Pago harbor.

Guano Islands. Besides Tutuila, the United States has more or less definite claims to a number of scattered islets in the equatorial region which are usually designated collectively as "the guano islands" because their only value thus far has been due to guano deposits which they bear. In 1856 Congress authorized American citizens to register newly discovered islands and to give bonds to carry on the removal and sale of guano in accordance with certain rules, in return for which the United States extended to their interests its protection. Very seldom, however, has any definite claim of American sovereignty been made.

COLOMBIA

THE REPUBLIC OF COLOMBIA occupies the extreme northwestern part of South America, and embraces an area estimated at from 455,000 to 505,000 square miles. Its frontier line with Venezuela was established by arbitration in 1891 and that with Ecuador is to be settled in the same manner. With Brazil it has as yet no established frontier.

Mountains. The Andes Mountain system, spreading out toward the north like the ribs of a fan, forms three cordilleras, which shape the surface of the western portion of the country. The Eastern Cordillera has its origin in a low ridge of mountains known as the Miraflores Chain. Thence it extends almost due north to the Sierra de la Suma Paz, skirting the Cundinamarca Plateau near Bogotá, with a mean elevation of 11,000 feet; the highest summit is Nevado (15,800 feet). North of Bogotá and as far westward as the Magdalena Valley is a confused mass of rugged mountains that merge into the Sierra Nevada de Cocui. In this section the Eastern Cordillera attains its loftiest elevations in several domes from 15,000 to 15,700 feet high. Farther to the north the range is divided into two branches, one of which, trending eastward, joins the Sierra de Merida of Venezuela that extends to the Caribbean Sea at Cape Codera, while the other, the Sierra de Perija, continues northward into the neck of the Goajira Peninsula.

The Central or Quindio Cordillera, lying between the Magdalena and Cauca rivers, illustrates the volcanic character of the country more strikingly than either the eastern or the western chain. Located near the Ecuador frontier are three mountains, Cumbal (15,710 feet), Chiles (15,680 feet), and Azufral (13,360 feet); a little north of these rise three massive volcanoes, Bordoncillo (Patascoi), Campanero, and Pasto. The last named, the loftiest of the three, has an altitude of 13,990 feet and is the most active volcano in Colombia. Beyond this region lies the "Massif of Colombia," as it is called, being the point where four of the principal streams have their sources. To the northeast stands Purace, an active cone 15,420 feet in height. The gigantic chain of volcanoes culminates near its center in Tolima (18,400 feet), which has been extinct since 1829.

The Western Cordillera or Choco Range extends from the Patia River nearly due north and parallel to the coast, but approaches so closely to the western bank of the Cauca River as occasionally to infold that stream. It attains its greatest elevation in Cerro Munchique (9,880 feet). In the northeastern corner of Colombia is a massive group of mountains that have no close connection with the Andes system, known as the Sierra Nevada de Santa Marta, covering an area of a little more than 6,000 square miles, with snow-capped peaks here and there rising to elevations of 17,000 feet and over.

STREET SCENE IN BOGOTÁ

Situated on the edge of a plain at the point where a mountain slope sweeps down and merges in the lower level, the Colombian capital has picturesque surroundings. The city itself, however, is not striking in appearance. Owing to the prevalence of earthquakes, the houses are limited in height to two stories. In architecture there is little variety. As a rule the dwellings of the poorer people of the city are very plain, being built of stone or adobe and whitewashed on the outside.

Rivers. The principal river of Colombia is the Magdalena, surpassed in volume and length only by the Amazon and Orinoco rivers and the Rio de la Plata. It is 1,060 miles in length and at high water is navigable for 830 miles. With its numerous affluents the Magdalena River drains nearly 96,000 square miles of territory. One of these tributaries is the Rio Caesar which flows southward between the Santa Marta Range and the Eastern Cordillera. Next in size to the Magdalena is the Cauca River, only partly navigable, because of rapids in its course. The Sinu River rises in the Western Cordillera and reaches the Caribbean Sea through the Gulf of Morrosquillo, being navigable for small craft for about 100 miles. The Atrato River is navigable for about 230 miles. The San Juan River rises near the Atrato River but flows south and empties into the Pacific Ocean about 200 miles from its source. Owing to the narrow stretch of land between the Western Cordillera and the Pacific Ocean, most of the rivers on that side are mere mountain torrents.

Climate, Flora, and Fauna. The marvel of Colombia is the ease and rapidity with which one can change his climatic surroundings. The Caribbean coast is hotter than the Pacific. In the lower regions along the sea and rivers and in the great plains of the east the mean annual temperature ranges between 83° and 75°; this hot zone extends up to an elevation of about 3,000 feet. It is succeeded by the temperate zone, comprising the region between 3,000 and 6,500 feet in elevation. The so-called *tierra fria* or cold zone, extending from 6,500 to about 10,000 feet in altitude, covers the elevated plateaus.

The flora of Colombia is exceedingly rich and varied. The coffee plant is indigenous at altitudes between 2,000 and 4,000 feet. In the hot lowlands cacao, bananas, sugar-cane, indigo, rubber, tobacco, vanilla, cotton, and rice are natural products, while in the intermediate regions the cereals and vegetables of the temperate zone grow luxuriantly. Dense forests occupying large tracts abound in tropical woods and medicinal plants. Cinchona and similar plants employed as tonics and febrifuges abound. The monkey, puma, jaguar, and deer are common; alligators swarm in the Magdalena River; the sloth, armadillo, opossum, and cavy frequent the forests, and the tapir wanders in high elevations. Among the birds are the condor and other birds of prey. Boa constrictors and venomous serpents are abundant.

Resources and Industries. Colombia is marvelously rich in minerals. There is hardly a department in which gold has not been discovered. Besides gold are found iron, platinum, lead, cinnabar, manganese, silver, copper, quicksilver, coal, rock-salt, marble, sulphur, alum, petroleum, and asphaltum. Diamonds sometimes are

found and the emerald mines of Muzo furnish the finest gems in the world. The coal measures around the Gulf of Darien have extensive anthracite, bituminous, and lignite veins. East of the Magdalena River and extending from the Sierra Nevada de Santa Marta to the Rio Fundacion, a distance of seventy miles, there is another large bed containing a fine grade of cannel coal. Petroleum, remarkably pure, has been discovered on the Caribbean coast. Valuable marble exists near the San Juan River.

Although the soil is rich and adapted to agriculture, only a very small area is cultivated. The principal crop is coffee, other products being cacao, sugar-cane, tobacco, cabinet and dye woods, vegetable ivory wheat, corn, fruit, rubber, and vanilla. The rubber tree and copaiba plant, which grow wild in Colombia and are tapped, have not been brought under cultivation, but the culture of tolu balsam, also abundant in the forests, has become important. There are large grazing districts used for cattle, sheep, goats, and swine. Manufactures are almost unknown, only a small number of factories for rough cotton and woolen cloths and a few iron works having been established.

HUMBOLDT'S HOUSE, BOGOTÁ

For a space of six or eight months Von Humboldt, the great German scientist, lived at Bogotá and worked his notes of travel into literary form. His lodging-place is still pointed out to visitors by native guides, who pretend to know the precise peg upon which the famous man was accustomed to hang his mule saddle.

History. The northern coast of Colombia was explored by Alonzo de Ojeda, in 1499, and by Columbus in 1502. Soon afterward settlements were established by the Spanish, but not until 1536-37 was the plateau conquered by Ximenes de Quesada, who invaded it from the north. Under Spanish rule the region was not important, but in 1718 a viceroyalty was established over the region. In 1811 a revolt began against Spanish rule which lasted fourteen years and during which the Republic of Colombia was organized in 1819, including the regions of Venezuela and Ecuador. The republic broke up in 1829–30 with the secession of the latter states. General Santander then reorganized the remnant into the Republic of New Granada. In 1858 the republic became a confederation of eight states, and in 1863 the old name of Colombia was restored. In 1886 an effort was made to insure peace by centralizing power. The autonomy of the states was largely destroyed and their control put in the hands of the president of the republic. The efforts of French capital to build an interoceanic canal at Panama gave Colombia, for the first time, an importance in the world's affairs, as Panama was part of the Colombian territory. Colombia encouraged the French plan to dig the canal, but when, in 1903, the United States took up the effort, the Colombian congress rejected the arrangements proposed. The result was the immediate secession of Panama and the loss of the Isthmus to Colombia.

CARTAGENA, THE CRADLE OF LIBERTY

Girdled by a massive wall built long ago by Spanish masters and protected by gray old forts whose moss-grown bastions have frowned at the harbor's entrance for nearly three centuries, the ancient port of Cartagena sleeps the years away. Formerly, during the Spanish occupation, it was an important naval and commercial center, but it is so no longer. Here, in 1811, began the great revolt which eventually brought independence to all the South American colonies of Spain, and of this share in history the citizens of the old town are very proud.

Government and Society. The government is vested in a legislative body of two houses called the Senate and House of Representatives, the Senate being composed of three delegates from each of the eight departments. The representatives are chosen according to population. The president holds office six years and has a cabinet whose members are responsible to congress. The governors of the several departments are appointed by the president.

The people of Colombia are largely of Indian blood and nearly one-tenth of the total population is made up of uncivilized tribes. Social conditions are exceedingly crude, education being scantily diffused and progressive spirit being confined to a small element. The Roman Catholic religion is almost the only form of faith existent, although toleration is the law of the land. Some pretense at a national educational system is made, but the poverty of the country and naturally adverse conditions have prevented any extended efforts. In a number of towns there are secondary schools, usually controlled by the clergy. At Bogotá is a National University which has faculties of medicine and science. Two other colleges exist under clerical management. Primary education, where it exists, is free, but not compulsory.

Commerce. Because of its peculiar topography the republic is much hindered in the development of its commerce. The great mountain chains and high plateaus approach so closely to the coast that railroad building is very expensive if carried any great distance inland. Because of this fact the great interior region of the Orinoco basin is practically shut off from coast commerce and the great plateau region is nearly as unfortunate. The lower part of the Magdalena basin is the only large section to which commerce has easy access, consequently the important ports of Colombia are the four that are located on the Caribbean, namely, Riohacha, Santa Marta, Sabanilla, and Cartagena. The two Pacific ports, Buenaventura and Tumaco, are unimportant because of the narrowness of the coastal plain behind them. In default of railroads, interior commerce is carried on over mule paths and on the waters of the rivers. The Magdalena is the greatest artery of the inland trade, a large number of steamers being employed in transporting produce from the interior regions that are reached by the river and by those of its affluents that are navigable.

The exports of Colombia go chiefly to the United States, Germany, Great Britain, and France. Cattle and hides form a large part of the shipments. Gold and silver are also important. Among the vegetable and forest products exported are coffee, bananas, rubber, cocoa, and ivory-nuts, with cedar and mahogany timber. The imports taken in exchange are flour, rice, salt, liquors, petroleum, cotton goods, and hardware. The chief cities of Colombia are Bogotá, the capital; Cartagena and Sabanilla, seaports; Santa Marta, port used in coast trade; Barranquilla and Honda, depots of the Magdalena trade, and Medellin, center of the mining industry of the Antioquia region.

VENEZUELA

VENEZUELA, a republic situated on the northern coast of South America, has an area of about 533,000 square miles. The boundaries of the country are not fully determined, the location of the divisional lines of Venezuela, Brazil, Peru, and Ecuador being as yet the subject of international controversies. The boundary with British Guiana was fixed by arbitration in 1899.

INDIAN HUTS, LAKE MARACAIBO

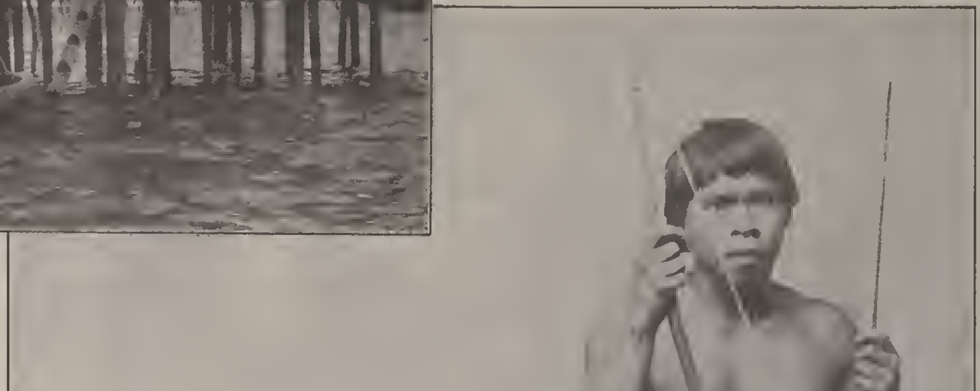
The name Venezuela, which means "Little Venice," was suggested to the early discoverers by the Indian villages, then, as now, built on piles and raised above the waters of Lake Maracaibo.

Mountain Ranges. There are three well-defined mountain ranges crossing Venezuela. The Sierra de Merida, which belongs to the Andes Mountain system, begins in the vicinity of Pamplona in Colombia, separates into two chains, one of which continues northward to the peninsula of Goajira, while the other extends eastward beyond Lake Maracaibo and intersects the Coast Range near Puerto Cabello. From the eastern chain another range projects westward nearly to the Gulf of Maracaibo. Of the Venezuela ranges the Sierra de Merida is the loftiest, having four or five peaks that rise above the snow-line; among these are Coluna and Pic Concha, southeast of Merida, both of which attain an altitude of about 15,400 feet. The upland plateau known as the Parimos, inclosed by these lofty ramparts and averaging over 11,000 feet above sea-level, is a barren, desolate tract with a cold climate.

East of the Sierra de Merida is the Coast Range or Cordillera de la Silla (the Saddle Range), that extends east to the Gulf of Paria. It lies parallel with the Caribbean coast and attains its greatest elevation in La Silla and Naiguata, near Carácas, which reach to heights of 8,745 and 9,130 feet, respectively; thence toward the east it gradually becomes lower until the culminating peak has an elevation of only 3,510 feet. Parallel to the Coast Range, but about seventy or eighty miles south of it, is the great Parima Chain. Although the southern uplands cover a far more extensive area than do the northern, they nowhere attain such lofty altitudes, nor do they anywhere develop ranges so well and sharply defined. The whole region is a vast turtle-back plateau, crossed in various directions by short ridges.

Rivers and Lakes. All of the important waterways of Venezuela are tributaries of the Orinoco River, which is one of the great streams of the world. The Orinoco has its sources in the Sierra Parima and drains a basin whose total area is about 370,000 square miles. During the rainy season, from May to November, steamers ascend to Nutrias on the Apure River, but there is no regular navigation above Caicara. Between the Casiquiare and Apure rivers the Orinoco River has only one important tributary from the east, the Ventuari River; from the west it receives several, the Guaviare and Meta rivers being the largest. North of the junction with the Guaviare River are the Maipures and Atures rapids or cascades, that form the only obstructions of this character throughout the whole course of the main stream. These rapids present a total fall of seventy feet in a distance of about thirty-six miles. Below the rapids a perfect network of streams empty their waters into the Orinoco, culminating with the Apure, once regarded as the main stream. This immense watercourse brings to the Orinoco the drainage from the slopes of both the Venezuelan and Colombian Andes and develops a vast inland delta formed by a mingling of the channels of the Apure and Arauca rivers. About 130 miles from the sea the formation of its enormous delta begins, the ocean frontage of which is 430 miles.

On the rocky and broken Caribbean coast of Venezuela, between the Goajira Peninsula and the Gulf of Paria, there are no navigable rivers emptying directly into the sea; the coast streams are rapid brooks flowing down to the shore. From the steep sides of the Cordilleras, Lake Maracaibo receives a vast number of streams, one of which, the Catatumbo River, is navigable. Lake Maracaibo is the largest body of inland water on the Southern Continent and is so landlocked that the tides are hardly perceptible inside of the bar. It has a circumference of 370 miles, an area of 9,000 square miles, and an extreme depth of 500 feet.



SAVAGES OF THE UPPER ORINOCO

The interior tribesmen of the great river valley are splendid specimens of physical development and are singularly intelligent as well. Keenly suspicious of the whites, they have little to do with the settlements. A small trade exists, however, the Indians bringing palm-fiber hammocks, dyed grasses, gums, and skins to exchange for needed articles.

Climate, Flora, and Fauna. The climate in Venezuela is dependent upon elevation rather than upon latitude. The hot zone is between sea-level and an altitude of about 2,300 feet. Above this is the temperate zone, with an average temperature of about 65° Arctic weather is encountered at an elevation of 14,600 feet, the limit of vegetation. There are two seasons—the wet, occurring in the months corresponding with the summer, and the dry, which coincides with winter of the north temperate countries. The trade-winds bring rain.

The flora of Venezuela is luxuriant, especially on the lower slopes of the mountains and in the central valleys where the forests contain many varieties of trees that are valuable commercially. Nearly one-half of the area of Venezuela is covered with equatorial forests. A large number of trees yielding beautiful cabinet woods, the cacao, cinchona, and india-rubber, and numerous varieties of the palm family abound. Among cultivated plants are coffee, cotton, sugar-cane, and indigo.

In the dense forests are the ant-eater, sloth, spectacled bear, jaguar, and monkey. Tortoises are very numerous; the eggs of one species are gathered for the oil. The marshy and malarious districts are infested with serpents, among which are the dreaded anaconda or water-snake, the boa-constrictor, rattlesnake, and other venomous species. Even the waters swarm with fish as vicious and dangerous as the land reptiles.

Resources and Industries. One-fifth of the population of Venezuela is engaged in agriculture, but the resources of the country are by no means well developed, owing largely to the lack of labor By far the larger portion of the more fertile areas is wholly unoccupied. Except along the large rivers pack-animals and mule carts are almost the only means of communication between the coast and the interior, the lack of transportation facilities accounting in great measure for the present thriftless conditions that exist Steamers ply on the Orinoco, Apure, and Portuguesa rivers. The few railroads are between points near the northern coast. Manufacturing is limited to the production of the most common articles of use, such as soap, matches, straw goods, rum, hats, and shoes.

RIVER FRONT AT CIUDAD BOLIVAR

This city, formerly called Angostura, is situated on the Orinoco River, 373 miles from its mouth. It is reached easily by ocean steamers, except in the spring months, and is one of the important ports of Venezuelan commerce. During the spring vessels discharge into lighters a few miles below the city. Large amounts of coffee are shipped from this port. Historically, it is notable as the scene of the formal creation of the new republic in 1818.

Coffee culture is the leading industry. The production of sugar and cacao, grown in the lowlands, is next in importance. Cattle raising is almost the only occupation of the llaneros; yet, while millions of head of cattle could be fed upon the llanos, the industry is limited. Tobacco, corn, rice, wheat, barley, potatoes, and a little cotton of inferior quality are grown. The leading forest products are rubber, tropical woods, and tonka-beans. The timber resources are valuable but difficult to bring to foreign markets. The country is rich in minerals; gold, silver, iron, tin, copper, asphaltum, coal, petroleum, and sulphur are known to exist in large quantities. Gold is found chiefly in the Yuruari Territory. Copper mines are numerous and rich. Great deposits of rock-salt are mined under government supervision. Mines of jet, deposits of porcelain-clay, and beds of white granite remain undeveloped, as do also many of the lakes of asphalt.

The chief cities are Carácas, the capital, distant two miles from its port, La Guaira; Valencia, the trade center of the most flourishing agricultural district in the republic; Maracaibo, the most available port for a large portion of Eastern Colombia; Barcelona, a seaport for shipment of live stock and products; and Ciudad Bolivar, the commercial center of the Venezuelan llanos.

History. The eastern coast of Venezuela was discovered by Columbus on his third voyage in 1498. It was settled by Spanish colonists. The people revolted in 1806, but failed. Again they rebelled in 1811. The Spaniards would probably have again triumphed but for the entry upon the scene of Simon Bolivar, who, having liberated Colombia, swept east with his victorious army before marching into Peru. The independence of Venezuela may be said to date from the battle of Carabobo in 1822, when Bolivar delivered a crushing blow and forced the Spanish troops to cease all aggressive warfare. With freedom won, Colombia, Ecuador, and Venezuela united to form the republic of Colombia, but Venezuela seceded in 1829. General Paez, one of the prominent military figures during the war, became the first Venezuelan ruler. He established a system of political dictatorship which has been followed by most of his successors. Many revolutionary movements have marked the republic's history. To President Guzman Blanco Venezuela is indebted for a large part of its material progress.

In 1902 Great Britain, Germany, and Italy united in a determination to enforce the payment of indemnity for foreign property destroyed during civil strife. Their naval force seized the Venezuelan fleet at La Guaira, and arranged a joint blockade of the entire coast. Subsequently two of the coast towns were shelled, with considerable loss of life. The United States secured a settlement of the trouble by the Hague Tribunal.

Government and Social Conditions. The present Venezuelan constitution, adopted May 2, 1904, is similar in many respects to that of the United States. Under an act passed in 1899 the republic is to be reorganized by the creation of twenty autonomous states in place of the sixteen states and territories which formerly existed. The work of reorganization has extended over a number of years, and several of the new states are in existence under provisional governments. The President, elected for six years, is assisted by a Cabinet of Ministers and a Federal Council. The Council is elected by the Congress. Neither the Council nor the President can be reëlected for the following period. Legislation is vested in a Congress of two Houses—the Senate and the House of Representatives. The Senate is composed of three Senators for each State and for the Federal District, who are elected by State Legislatures to hold office for four years. The Representatives are elected for a four-year term by popular vote.

As in most South American countries, there is a large percentage of Indian blood among the citizens of the republic. About one-sixth of the total population is reckoned as purely Indian and one-fourth of this element is uncivilized. The more advanced portion of the Venezuelan people is of Spanish descent and the aliens resident in the republic are mostly Spaniards and Colombians. Efforts have been made to secure European immigrants, but with little success. In religion the people are Roman Catholic. That form of faith has the status of an established church, but the hierarchy are very closely restricted in their activities by stringent laws. Non-Catholic beliefs are tolerated.

ARCH AT CARÁCAS

The chief city of Venezuela has several patriotic memorials. Among them is the handsome stone arch erected in honor of the Venezuelan federation of states.

Efforts have been made to establish a national system of education. In 1870 education was made free and compulsory. At that time nine-tenths of the population was illiterate. Political disturbances have interfered with the work, but the percentage of illiteracy is now believed to have fallen from nine-tenths to three-quarters of the population. There are about 1,600 primary schools and six universities in the country The wealthier families often send their children abroad to be educated.

BRAZIL AND GUIANA

THE UNITED STATES OF BRAZIL, a republic of South America, lies on the eastern side of the Continent. It embraces an area of 3,218,130 square miles, or more than one-half that of the Continent. The sea-coast of 4,000 miles is about the same in length as the Atlantic and Gulf shore-lines of the United States. Less than half of the population is of pure white blood, but descendents of Portuguese form the dominant element, and Portuguese is the national language.

Mountains and Plains. Generally speaking, the surface of Brazil is divided into two sections, the elevated plateaus of the eastern and central portions, occupying about 700,000 square miles, and the lowlands, comprising a large part of the Amazon and other great river basins. The highland plateau reaches its highest point in Itatiaia-assu, which attains an altitude of 10,040 feet. Traversing the plateau are three distinct but irregular chains that follow in roughly parallel lines the Atlantic Coast, while a fourth trends in the State of Matto Grosso from south to west between the waters seeking the Amazon River on the north and those flowing south into the Paraguay basin. The coastal range is the Serra do Mar. West of this range is the Serra da Mantiqueira, prolonged northward by the Serra do Espinhaço, these two forming the "backbone chain" of the Brazilian mountain system. A series of plateaus, called the Espigão das Vertentes, trends westward between the São Francisco basin on the north and that of the Paraná River on the south, and forms the great divide between the waters flowing north to the Amazon River and those moving south to the Atlantic Ocean.

VIEW OF RIO DE JANEIRO

From rugged hills that surround Rio de Janeiro may be obtained a bird's-eye view of the business portion of the city. In the background is the harbor, and beyond it the Isla das Cobres. The residence districts of the city lie farther back from the harbor, among the hills, while the business portion occupies a plain.

North and west of these highland regions are the lowlands that embrace the State of Amazonas and nearly all of Pará and Maranhao, or more strictly the entire valley of the Amazon River, with the lower courses of its northern and southern affluents, together with the lower Tocantins, and the neighboring coast streams as far as the Parahiba River.

Rivers. The Amazon, from the head of the Apurimac 3,415 miles long, is not the longest river in the world, although it is largest in the volume of its waters, which is said to be greater than that in any of the eight principal rivers of Asia, and is explained by the abundance of tropical rains. The extent of its drainage area, 2,320,000 square miles, is more than double that of any other system. The Amazon affords easy communication between the Atlantic Ocean and the base of the Andes Mountains. The upper waters of the Rio Negro are connected with those of the Orinoco by the natural and navigable channel of the Casiquiare, the surface in that region being too level to form a watershed. Besides the Amazon and its affluents Brazil has several other large streams. Emptying directly into the Atlantic Ocean are the Parnahyba, São Francisco, Itapicuru, and Jequitinhonha rivers, while flowing south are the Paraná and Paraguay rivers.

SERRA, A TYPICAL COUNTRY HAMLET

On one of the roads that lead from the Brazilian coast to the coffee-growing districts of the interior is Serra, a little group of whitewashed houses, notable merely as a place of entertainment for travelers, and a stopping place for the bullock trains that drag freight across country on clumsy, wooden-wheeled carts.

FREIGHTING SUPPLIES ON THE SANTA MARIA RIVER

As in other countries where artificial highways have not been much developed, the Brazilian rivers are used as avenues of travel and local trade. The Santa Maria is one of the lesser streams of the Atlantic littoral. Merchandise passes up and down the river on long canoes, manned by expert boatmen. For the greater part of the river's course the boat is propelled by laborious poling, so shallow are the long reaches of the stream.

Climate, Flora, and Fauna. With the exception of the three small southern States of Paraná, Santa Catharina, and Rio Grande do Sul, Brazil is entirely included within the torrid zone; hence the climate is tropical except in localities where it is modified by marine influences or by altitude. The northern lowlands, being entirely equatorial, have a high temperature throughout the entire year, with two distinctly marked seasons, the

wet and the dry. The elevation of the central and southern highlands produces a variable climate and temperature, while in the extreme south the four seasons are as characteristic as elsewhere on the globe. In the Amazon Valley and in the interior the rainy season extends from December to May.

The flora of Brazil is tropical, the Brazilian forests, especially those of the Amazon plains and the large tracts contiguous to the seaboard, containing almost every species of tree that is ornamental or of commercial value. Along the coast mangrove and cacao trees are numerous, and the Brazilian wax-palm, one of the most useful trees of the country, grows extensively in the northeastern States. The rosewood, trumpet, laurel, soap, tapia, and caoutchouc trees, and a great variety of palms are included in the forest growth. The varieties of fruit and nuts are numerous and excellent. The animals characteristic of Brazil are the peccary, agouti, tapir, armadillo, paca, puma, coati, and the rhea or American ostrich, as well as species of monkey. Fishes and tortoises abound in the Amazon River.

A STREET IN THE CITY OF BELEM

THE HARBOR OF VICTORIA

Victoria, the capital city of the agricultural State of Espiritu Santo, is one of the principal immigration ports of Brazil. Great numbers of settlers from European countries arrive here annually. The harbor is an excellent one, enclosed by a group of low mountains that effectively shelter shipping from storms. The city was founded in the early days of Portuguese colonization, and, with varying fortune, has held, almost continually, importance as a commercial point.

Resources and Industries. Brazil is essentially an agricultural country, although only a small portion of its territory has been brought under cultivation. Coffee and sugar are the leading staples. Brazil is one of the largest producers of these commodities in the world. Coffee is grown in the highlands, São Paulo being now the center of coffee production. Sugar-cane is grown on the coastal lowlands, the center of the industry being at Pernambuco. Cotton is raised principally in the northeastern States and forms an important factor in the foreign trade of the country. Tobacco is raised in Bahia and adjacent States. India-rubber is abundant in the forests of the tropical lowlands and cultivation of the rubber tree is extending. Cacao is also grown for export. Valuable vineyards exist in Minas Geraes. Yams, manioc, black beans, rice, corn, sweet potatoes, bananas, and arrowroot are important food products.

Mining operations are now of great economic importance. Gold is found in many places, and is mined systematically in Minas Geraes. Rich deposits of gold, silver, lead, quicksilver, copper, zinc, iron, and other minerals are found in Bahia, but are very little worked. Manganese ores are exported to Europe. Several States possess valuable coal deposits awaiting development. Diamond-mining is carried on in Bahia and Minas Geraes.

Chief Cities. Rio de Janeiro, the capital city of the Republic, lies on the western side of a landlocked bay. The city is essentially a seaport, owing its importance entirely to its magnificent harbor. The port of Rio de Janeiro is the principal outlet for the products of the country. The city has textile factories, flour-mills, and foundries. São Paulo, the capital of the State of the same name, is one of the principal depots of foreign immigration. It lies not far from the coast, with which it is connected by rail, on the inland slope of the Serra do Mar, and is one of the oldest towns in Brazil. Bahia, the capital of the State of the same name, has a splendid harbor and is one of the chief ports of the tobacco trade.

Pernambuco or Recife, the capital of a State, is the outlet for a region rich in sugar, cotton, coffee, and tobacco, besides being the radial point of several railways, and an important educational center. Belem, the capital of the State of Pará, is situated on the Guajara inlet of the Para Estuary. It has of late become important as a commercial outlet of the Amazon region. Porto Alegre, the capital of Rio Grande do Sul, near the head of Lagoa dos Patos, has coal mines near and is the converging point of all the land and water highways of Southeastern Brazil.

Government. By the constitution of Brazil the chief executive authority is vested in a President, who is elected by popular vote for a term of four years and is not eligible for the ensuing term. The legislative power is vested in a National Congress, consisting of a Senate and a Chamber of Deputies. Senators are elected by a direct vote for nine years. The Deputies are chosen in the same manner for three years. The separate States maintain their own executive, legislative, and judicial authorities, and the right of the Federal Government to interfere in their affairs is restricted

COFFEE WAREHOUSES AT VICTORIA

Extensive shipments of coffee from the State of Espiritu Santo aid in making the port of Victoria one of the important points of Brazilian commerce. Capitalists of the United States are interested in the coffee trade at this point. Among the stately warehouses that face the harbor front the most prominent are those owned by a New York firm which exports largely from this section.

VIEW OF VICTORIA FALLS, ON THE IGUAÇU

The Iguaçu, its name meaning "Great River," empties into the Paraná on the Paraguayan boundary. Its course is broken by frequent falls and rapids. About six miles above the junction with the Paraná is the greatest of its cataracts, the famous Victoria Falls. At this point the stream has a descent of 200 feet, and the gathered waters dashing into the abyss below present a view of unusual beauty, especially when floods swell the river's volume to unusual proportions.

by the constitution. Brazil is deficient in most matters pertaining to education, a very large part of the population being illiterate. Primary education is free and in some States compulsory. Higher education is controlled by the Federal Government.

Historical. Brazil was discovered in 1500 by the Spaniard Vicente Yañez Pinzon. In the same year the Portuguese explorer Pedro Alvarez Cabral also examined its coast, calling it Terra Vera Cruz and taking possession in the name of Portugal. Between 1532 and 1535 Portuguese settlements were established, and Brazil remained a Portuguese colony until 1815, when John VI, having made it a refuge for the royal family during the Napoleonic wars, erected it into a kingdom, joined with Portugal as a dual monarchy. It received a constitution in 1821. Meanwhile the Spanish-American colonies had revolted from Spain, and the revolutionary spirit reached Brazil, taking the form of a declaration of independence from Portugal, and the adoption of the royal prince Pedro as Emperor of Brazil. Emperor Pedro I ruled until 1831, when a revolution forced his resignation. His son and successor, Pedro II, retained the crown until 1889, when he was deported by revolutionists and a republic proclaimed. Under the new Republic the country was reorganized into a federated state.

GUIANA

Guiana, lying along the northeastern coast of South America, is named from the Guiana, or Guaynos, Indians, and embraces three colonial areas, belonging respectively to Great Britain, the Netherlands, and France. The British area is about 109,000 square miles; Dutch Guiana has 46,060 square miles, while the French colony has 30,500 square miles.

Physical Features. The coast-line, approximately 740 miles in length, is low, shallow, and skirted with banks of alluvial soil. The low coastal belt extends inland from forty to fifty miles, whence the land gradually rises until it reaches the northern edge of an interior table-land. A low plateau then ascends gradually toward the south to a broad table-land intersected by ranges of hills extending to the sierras of Acarai and Tumuc Humac in the extreme south. These mountains form the divide between the streams flowing northward into the Atlantic Ocean and those trending southward to the Amazon River. The culminating point of Guiana is Mount Roraima (about 8,600 feet), in the British colony.

A CREOLE OF GUIANA

The largest river is the Essequibo, 600 miles in length, and navigable for about fifty miles from the coast. On the Potaro River occur the great Kaieteur Falls, 740 feet in height. The Demerara and Corentyne rivers are each navigable for about 100 miles, and the Berbice and Marowyne for less distances.

Climate and Resources. The climate of Guiana is tropical, but the intensity of the heat is tempered by the northeast trade-winds which blow steadily throughout the greater portion of the year. Fully one-half of the region is covered with dense forests of great value. Economic plants, including cabinet woods, dyewoods, rubber, and medicinal, resinous, aromatic, and gum-bearing species, abound. Among the larger animals are the jaguar and ocelot, several varieties of deer, including the marsh deer which frequents the swamp districts, and the armadillo, peccary, opossum, and ant-bear.

The wealth of Guiana consists mainly in its agricultural products. Sugar formerly was the one great staple under cultivation, but in British Guiana rice, tobacco, and cacao are taking its place, while in Dutch Guiana cacao and coffee are supplanting it. In French Guiana the greater part of the land under cultivation is devoted to rice, maize, manioc, cacao, coffee, and tobacco. French Guiana has a large gold output; Dutch Guiana also produces a considerable quantity, and the British colony exports the precious metal as well as diamonds.

RESIDENCE AT GUARAPARI, USED AS A HOTEL

The larger cities of Brazil have hotels like those of other countries, but in the smaller cities that are aside from the regular routes of travel some private householder usually takes upon himself the functions of landlord when unbidden guests appear. The hotel at Guarapari is simply a private home of the better class. Its architecture is characteristic of the country.

Government and History. British Guiana has a Governor, assisted by a council called the Court of Policy, of whose members one-half are elective. George Town, the capital, on the Demerara River, is also the chief port. Dutch Guiana has a Governor and Council, but legislation is shared with the Estates, composed of elective members. Paramaribo, on the Surinam River, is the capital and center of trade. French Guiana, under a Governor and Privy Council, is a penal station of the French Republic. Cayenne, at the mouth of the Cayenne River, is the capital and trade center.

The Guiana coast was explored at an early date by the Spaniards, but the first settlements were made by Dutch traders near the Pomerun River in 1580. French establishments were made in 1626 and English trading-posts in 1630. The Dutch excluded the English from Guiana in 1667, but during the Napoleonic wars the English seized the Dutch colonies, and retained, at the establishment of peace in 1814, the part now called British Guiana.

URUGUAY AND PARAGUAY

URUGUAY

URUGUAY, or "The Eastern Republic of the Uruguay," as it is officially called, is the smallest independent State of South America. It lies on the eastern coast of the Continent, wholly within the south temperate zone. Its area is 72,210 square miles, and it has a frontier and coast-line 1,075 miles in extent. The foreign-born portion of the population includes large numbers of Brazilians, Italians, and Spaniards.

Physiography. The coast along the Atlantic Ocean is low and sandy, while along the Rio de la Plata it is high and rocky, and indented by several wide bays. The valley of the Uruguay River is generally low. The interior of the country presents an almost unbroken series of undulations formed by numerous chains of hills and low mountains, covered for the most part with luxuriant forests. The most important of these ranges are the Cuchilla Grande and the Acegua. Uruguay has eleven rivers of considerable size and many small streams. The Rio de la Plata extends along the southern confines of the country for 170 miles. The Uruguay River, from which the republic takes its name, forms the boundary between Uruguay and the Argentine Republic, and is navigable for large vessels 200 miles. The Rio Negro, the largest tributary of the Uruguay River, which rises in Brazil near the Uruguayan frontier and flows southwest across Uruguay, is navigable about twenty-five miles.

Near the coast the climate is equable; the summer heat is not intense, and the winters are mild. Inland the summer heat is extremely oppressive, while in the winter months of June and July the temperature often falls below freezing point. The heaviest rains occur in the summer months, and are often torrential in their force and quantity Herbaceous growths form the distinctive feature of the Uruguayan flora. Grassy hills afford natural pastures almost unsurpassed elsewhere in the world. Among trees are the ombu, willow, poplar, mimosa, and bamboo. Deer are frequently seen on the grassy plains.

VIEW FROM MONTEVIDEO WHARVES

Away to the left of the wharves along the shores of Montevideo Bay extends the great tidal roadstead of the Rio de la Plata, while across the Bay the distant view discloses the rounded form of the Cerro or Mount to which the city owes its name, Montevideo meaning, literally, "I see a mount."

MONTEVIDEO, AS SEEN FROM THE CERRO

Montevideo harbor is formed by the enclosing arms of two peninsulas. On the eastern arm stands the city itself, while on the western, at the foot of the low mountain called the Cerro, is a suburban town. From the slopes of the Cerro can be obtained an excellent, though distant, view of the Uruguayan capital. Close at hand are the white buildings of Villa del Cerro; farther away is the harbor entrance with its anchored fleet of freighters, and beyond are the clustered roofs of Montevideo, in a receding vista.

Resources and Cities. Agriculture in its two great divisions forms the leading industry of the country. Husbandry proper, or the raising of crops, is confined almost exclusively to the three southern departments of Canelones, San José, and Colonia. The principal cereals are wheat and maize, while olives, grapes, pomegranates and other fruits, and tobacco are cultivated. The cultivation of the soil, however, is insignificant as an industry in comparison with stock-raising and the preparation of animal products. These products include jerked beef, frozen meat, canned tongue, beef extract, hides and skins, tallow, and wool. The hills of Uruguay are believed to be rich in minerals. Gold mines are worked in the northern departments, especially in Rivera, and silver, lead, copper, and lignite exist. Jasper, porphyry, alabaster, and agate are quarried in Salto.

Montevideo, the capital, on a peninsula which projects between the Bay of Montevideo and the Rio de la Plata, is among the cleanest and the best built of South American municipalities. It is noted among the cities of South America for its culture. Paysandú is situated on the Uruguay River. The industries of the city are devoted to the preserving of meat. Salto, the capital of a department, also owes its prosperity mainly to its meat-preserving establishments. At present it forms practically one city with Concordia, the latter being a municipality on the Argentine bank of the river.

Government and History. Legislative power is vested in a National Congress, composed of a Senate and a Chamber of Representatives, which meets annually. The executive power is in the hands of a President elected for a period of four years, who is assisted by a Cabinet of five Ministers. Primary education is free and compulsory. At Montevideo is located the State University, and the instruction of teachers is provided for in several normal schools.

In 1512 Juan Diaz de Solis entered the Rio de la Plata and landed about seventy miles east of the site of Montevideo. Eleven years later Sebastian Cabot explored the Rio de la Plata and then sailed up the Paraná. Various unsuccessful attempts at colonization were made by the Spaniards but in 1680 the Portuguese established themselves at Colonia on the Plata, and in 1723 began a settlement which was attacked by the Spaniards and in time annexed. The war for independence began in 1810, and during its progress Montevideo was governed from Buenos Aires. Later the region was annexed by Brazil. The struggle for the sovereignty of the region between Brazil and Buenos Aires began in 1827, and was concluded the following year through the mediation of Great Britain, Uruguay being declared an independent State. It was formally constituted a republic in 1830. Its later history has been marked by many revolutions.

PARAGUAY

Paraguay is an inland State, with frontiers touching Argentine, Brazil, and Bolivia, its area being about 157,000 square miles. With the exception of Uruguay, it is the smallest of the South American Republics. The people are chiefly of Spanish or Indian descent.

THE GUAIRÀ FALLS

The Paraná River, reaching the Paraguayan frontier, passes over a high fall into a narrow chasm where the volume of water is compressed into a deep, foaming torrent, bearing a striking resemblance to that of Niagara River.

Natural Features. Practically the entire surface of Paraguay proper presents a succession of hills and valleys. Western Paraguay is apparently an immense plain, possessing few elevations, and subject to periodical inundations of great magnitude. Paraguay has two great rivers, the Paraná and the Paraguay. The Paraná disembogues into the Rio de la Plata. Navigation is difficult because of shifting sandbanks, but vessels drawing sixteen feet of water can ascend to Rosario, and smaller vessels ply to the confluence of the Paraguay. The latter river, although much shorter than the Paraná, is of considerably greater importance to Paraguayan commerce, since for 250 miles of its course it traverses the very heart of the State and is navigable beyond its borders far into Brazil.

THE PARANÁ RIVER

On its level stretches of navigable water the Paraná River, overshadowed for long distances by subtropical forests and often widening into lakelike expansions, exhibits scenes of great beauty.

In climate Paraguay is essentially a subtropical country, but, being fully exposed to the mild southwest winds and protected from the warm equatorial currents by the Brazilian highlands, it possesses a cooler and to a degree a more healthful climate than many other regions lying within the same parallels. Eastern Paraguay is mostly covered with primeval forests of magnificent subtropical trees, interlaced with flowering lianas. Western Paraguay consists mainly of swampy moorlands diversified with dense forests and occasional clumps of palm. Animal life is abundant everywhere. The jaguar, tiger-cat, wild dog, puma, ocelot, ant-bear, tapir, peccary, armadillo, capibara, and deer are found. Birds of forest and marsh exist in endless variety, and the rivers teem with saurians and enormous water-snakes.

Resources and Cities. The industrial wealth of Paraguay is largely dependent upon products of the soil. The most valuable of these is the indigenous *yerba-mate*, or "Paraguay tea." Oranges grow wild everywhere. Tobacco is largely grown for home consumption. Other important crops are sugar-cane, maize, manioc, and beans. Stock-breeding, especially of horned cattle and horses, is extensively pursued. Hides are an important export. No country is richer in value and variety of forest products than is Paraguay, but transportation is expensive, and, except for *quebracho colorado* wood, little of these figure in commerce. Gold, iron, copper, and marble exist, but are untouched. The manufactures of the country are insignificant as regards commerce.

Asuncion, the capital and largest city on the east bank of the Paraguay River, is, in general, very attractive in appearance. Among its notable buildings are a cathedral and a national college. Villa Concepcion, on the east bank of the Paraguay, is the largest city in the north; Villa Encarnacion, on the Paraná, the largest in the south. Villa Rica, in the interior, is situated in a noted tobacco-growing district. Villa del Pilar is a river port southwest of Asuncion.

Government and History. The legislative power is vested in a Congress of two houses, a Senate and a House of Deputies. The members of both houses are elected by universal suffrage. The executive power is vested in a President, chosen by an electoral college for four years. He is assisted by a Cabinet of five Ministers. Education is free and compulsory, but a very large percentage of the population is illiterate.

Sebastian Cabot explored the Paraguay River in 1526 and erected a fort called Santo Espiritu, but the first permanent settlement was made in 1537 by the Spaniards at Asuncion. In 1608 the Jesuits were introduced and their despotic rule lasted until 1767. In 1811 an assembly of deputies renounced allegiance to Spain and Paraguay was made an independent republic. The rule of Dr. Francia, from 1813 to 1840, was an absolute despotism, continued by his nephew, Carlos Antonio Lopez, who ruled until 1862, and by Francisco Solano Lopez, whose death in 1870 closed the dynasty. A new constitution was then adopted and the country has had a generally peaceful history since.

PALMA STREET, IN ASUNCION

The capital city of Paraguay has a character all its own. Residences and business buildings are built close to the sidewalks in solid blocks, and the buildings being painted in various colors, usually very pronounced in tone, the effect is bizarre but interestingly distinctive. Palma Street, one of the chief avenues of the capital, passes near the Cathedral, whose huge dome is a conspicuous feature of the city visible from nearly every point.

ARGENTINE REPUBLIC

THE ARGENTINE REPUBLIC, which is the second in size among the States of South America, lies east of the Andes and extends from Bolivia southward to the Straits of Magellan. The boundaries of the republic are practically fixed by various treaties. Its area is 1,135,840 square miles.

Plains and Mountains. Expanses of almost level prairie, and elevated regions traversed by lofty mountain ranges, make up the surface of this country. The lowlands extend from Buenos Aires northward to the Gran Chaco, and southward through Patagonia. The section of the country lying between the Rio Negro on the south and the Salado River on the north contains the pampas or treeless, grassy plains, which are covered with a rich soil from three to six feet in thickness, formed by the decay of the vegetation that grows upon them. Vast portions of the pampas are as level as the sea, with nothing to disturb their uniformity except an occasional tree. In the north their monotony is occasionally varied by a saline basin, but farther south they present a boundless expanse of tall grasses. North of the pampas are the plains of Entre Rios and the Gran Chaco. These vast plains are separated by various minor mountain ranges of no great height.

AVENUE OF PALMS, PALERMO PARK

The magnificent estate of Dictator Rosas, once ruler of Argentina, is now a splendid park famous for its race-track. It is located on the northern edge of Buenos Aires. Here, on Sunday afternoons, may be seen a characteristic phase of Spanish-American life, when an immense crowd, including the wealthiest people of the Argentine capital, assembles to watch the races.

The mountain region of the Argentine Republic consists of the eastern slopes of the Andes and their spurs. South of Mount Llullaillaco the western boundary coincides with the western apex of the Andean Cordillera, so that all of the eastern chains are included within the republic. Some of the peaks attain very lofty elevations. In the extreme northwest is the Cerro de las Granadas, which has many heights of 11,000 feet, while farther south many peaks are snow-covered throughout the year. West of the basin of the Jujuy River the Nevado de Chañi and the Tres Cruces reach altitudes of 18,000 feet and upward. South and beyond the western border of the plains of Tucuman is the Nevado de Aconquija (15,250 feet), while farther south, in the province of Rioja, the grand Nevado de Famatina rises to a height of 19,750 feet. In this vicinity are snowy crests exceeding 17 000 feet in height. Aconcagua (22,860 feet) is the culminating peak of the entire system.

South of the parallel of 39° S. lies Argentine Patagonia, a territory consisting mainly of high, undulating plains, or plateaus, rising in successive terraces and frequently crossed by valleys and ravines. These plateaus are occasionally covered with coarse grass, but more frequently with a stunted growth of bushes and herbs. Often even these are wanting, and in some localities the surface is strewn with huge boulders or heaps of bare, sharp-edged rocks, generally of volcanic origin. The soil in many places is strongly impregnated with saltpeter, salt lakes and lagoons being numerous, but there exist great tracts of arable land. South of the parallel of 52° lies Tierra del Fuego, a wild and desolate island covered with mountains, plains, and valleys, the eastern half of which belongs to Argentine.

River System. On the north the principal rivers are the Uruguay, Paraná, and Paraguay, the last two of which unite above San Fernando to form the great estuary known as the Rio de la Plata. Strictly speaking, the Uruguay does not belong to the rivers of Argentine, being on the eastern boundary and separating Argentine from Brazil and Uruguay. The river is ascended by the largest vessels to a point 373 miles from the sea. The Paraná River originates in Brazil, separates Paraguay from the Argentine Republic, receives the Paraguay and the Rio Bermejo, and enters Argentine, assuming a southerly direction until it empties into the Rio de la Plata. Its total length is at least 2,000 miles and it is navigable to the confluence of the Paraguay for vessels drawing ten feet of water. The main affluents of the Paraná River lying wholly or partly within the territory of the Argentine Republic are the Pilcomayo, Rio Bermejo, and Salado, lengthy streams, but shallow and difficult of navigation. The Paraguay River has a southerly course of 1,420 miles from its head in the Brazilian State of Matto Grosso, and in its lowest section separates Paraguay from the Argentine Republic; its value to navigation is very great, as steamers can ascend for 1,120 miles. In the province of Córdoba drainage is effected by the Rio Primero, Rio Segundo, and the Cuarto and Tercero rivers. The great streams of the south are the Colorado and the Rio Negro.

PLAZA DE MAYO, BUENOS AIRES

In the eastern portion of the Argentine capital is a great open square dedicated to the heroes of the Argentine War of Independence. It contains two monuments, one an equestrian statue of General San Martin, the Liberator, the other an obelisk in memory of the soldiers who fought for freedom. On the anniversary of Independence these monuments are decorated. At the south side of the Plaza stands the immense Hall of Congress where the Argentine legislators hold their sessions.

Flora and Fauna. There are three distinct zones of vegetation, the arboreal, comprising mainly the Gran Chaco woodlands; the herbaceous, on the pampas; and the zone of scrub or stunted growths of the Patagonian lowlands. In the Gran Chaco the chief trees are the Antarctic beech, Chilean *pehuen*,

apple-tree, wax-palm, two remarkable varieties of the mimosa, and the incense-tree, which yields a valuable resin. The pampas are covered with various grasses, and in most localities hardly a flower is to be seen. In the zone of scrubs, vegetation is everywhere scanty. The more common trees are the bush-like stunted chañar and the willow; the chief flower is the evening primrose; and in the salt plains of the upper Colorado basin enormous cacti abound.

ROCKY COAST OF PATAGONIA

Along the coast from Buenos Aires southward to Punta Arenas is an immense stretch of country covered with hardy vegetation or desolate with rocky wastes. In places the ocean washes against gigantic cliffs, while elsewhere the level surface comes down to the sea-shore in long reaches of sandy beach. Near the mouth of the Santa Cruz River is a typical landscape.

The principal wild animals are the jaguar, puma, wolf, fox, wildcat, guanaco, prairie-dog, armadillo, and vicuña. The condor of the Andes is the chief bird of prey, and two species of the American ostrich are found, the smaller inhabiting Patagonia. Multitudes of parrots, parrakeets, and humming-birds are remarkable for variety and beauty.

Resources and Industries. Agriculture and the allied industries form the most important occupations of the people. Of the two great departments of agricultural enterprise, stock-raising is at present the most widely followed, the vast natural meadows of the pampas affording unfailing sustenance for cattle and sheep. Formerly these animals were raised almost exclusively for wool, hides, and tallow, the meat being for the most part thrown away, but in 1882 the erection of meat-packing establishments was begun. The industry has now attained a high stage of development, especially in the preparation of mutton. Wool is an important article of export. Frozen beef ranks as an export second to mutton, and the foreign trade in jerked beef has reached very large proportions.

The raising of grain is of recent development. About three-quarters of the cultivated land is under cereals, chiefly grown in the provinces of Buenos Aires, Santa Fé, Córdoba, and Entre Rios. The acreage of wheat is large, and the product greatly exceeds the demands of home consumption. Next in importance among the crops are flaxseed and sugar. Rice, potatoes, tobacco, lucerne, and vetch are also grown largely. The timber resources are large but little utilized owing to the lack of suitable transportation facilities. Mining is carried on, although not so largely as the mineral resources of the country warrant. Lignite is worked in several districts, petroleum is found in Mendoza, and gold among the Andes. The manufacturing industries are not greatly developed, and those in active operation produce mainly flour, liquors, and sugar. Since 1890 several textile mills have been erected and a large part of the common woolen and cotton fabrics used is of domestic manufacture.

STREET IN JUJUY, ARGENTINE REPUBLIC

The terminus of the railway that extends into the north of Argentina was long at Jujuy. From here a mountain highway leads up to the heights of the Bolivian plateau. Situated in a fertile and picturesque valley, walled in by forested mountains, the town has a beautiful location, but is itself far from attractive. Its narrow streets, lined with small one-story adobe houses without windows and drained by uncleanly central gutters, are most uninteresting and uninviting.

Trade and Cities. The level plains of Argentine have facilitated railroad building and the chief cities of the country are all connected by rail. The development of the republic has been greatly stimulated by the trunk lines. Buenos Aires, capital of the republic and largest city of South America, is situated on the Rio de la Plata, about 150 miles from the sea. As a commercial city Buenos Aires ranks high. Until recently there was no really satisfactory port, but there has been completed, at a marvelous expenditure of engineering skill, an excellent harbor, consisting of a series of docks parallel to the shore of the estuary. Rosario is the commercial center of the northwest. La Plata, Tucuman, and Mendoza are provincial capitals and trading centers. Córdoba is the educational center of the republic, having a university founded in the eighteenth century, a national academy of science, an astronomical observatory, and a national meteorological bureau.

Historical. The Rio de la Plata was discovered by Juan Diaz de Solis in 1515 and explored by Sebastian Cabot in 1526. Settlement was not successful until 1580, when Garay established a colony which proved permanent. For nearly a century Buenos Aires languished under the burden of commercial legislation and of continued friction with the surrounding Portuguese settlements, although the colonies of the Rio de la Plata were made a viceroyalty in 1776. In 1806 England decided to take possession of Buenos Aires and sent an expedition for that purpose. The city was easily captured, but two months later the invaders were compelled to evacuate with great loss.

When Napoleon occupied Spain in 1810 the colonists declared themselves independent, but the country was soon involved in revolutions. A dispute with Brazil as to the sovereignty of the Banda Oriental (now Uruguay) led to a war in 1826-28 which was settled by making Uruguay independent. In 1835 Juan Manuel de Rosas, a successful army leader, was appointed Dictator of the republic. His reign—for Rosas was in reality, if not in title, an absolute monarch—covers the blackest period of Argentine history. He was driven from the country in 1852 and a year later a national congress promulgated the existing constitution.

Since 1853 the republic has made steady advances and has had less political disturbance than has its sister republics. Patagonia was annexed in 1879. President Roca (1880-86) was a friend to education and commerce and did much to develop railroads. Of late years the government has been largely engaged in developing the nation's resources by encouraging immigration and foreign capital.

Government. The government of the republic now covers fourteen provinces and ten territories. The constitution of the republic, modeled after that of the United States, dates from 1853. According to its provisions the executive power is vested in a President elected for six years by an electoral college. The President is commander-in-chief of the army and makes the appointments to all civil, military, and judicial offices. The Vice-President, elected at the same time, is Chairman of the Senate. The President is assisted by a Cabinet of eight members. The legislative powers are vested in a bicameral Congress. The Senate has thirty members, two from each province and two from the capital, the former elected by the provincial legislatures and the latter by a special electoral body. The members of the House of Deputies are chosen by popular suffrage. The Governors of the provinces are elected by the people, and each province has its own legislature which controls local matters.

CHILE

CHILE extends along the western coast of South America with an area of 307,620 square miles. Its length, from north to south, is about 2,600 miles and its width varies from 90 to 110 miles. The boundary line between the republic and Argentine, long in dispute, was adjusted by arbitration, in November, 1902. Easter Island, used as a penal station, lies in the South Pacific, over 2,000 miles from the Chilean coast. It has an area of 66 square miles, and contains three extinct volcanoes.

MUNICIPAL BUILDINGS, SANTIAGO

On one side of the beautiful Plaza Independencia, in the Chilean capital, are the buildings devoted to the city administration, bearing on their fronts devices indicating their character. In the center of the group rises a large clock-tower, very simple in its style but very effective in relieving the monotonous effect of the long, low buildings of which it forms a part.

Mountains. The entire eastern portion of the country is traversed by the Andes Mountain system, consisting for the most part of two chains, the Coast Range or Western Cordillera and the Andes proper or Eastern Cordillera, nearly parallel with each other. In the central region the former is conspicuous for about 700 miles. Here also is the great Central Valley between the two great chains, within which are located large centers of population. The Coast Range can be traced to the low ridges of the southern border of the province of Valdivia, where it disappears altogether from the mainland and breaks into the long chain of islands that skirts the coast to Cape Horn.

Very different in its general characteristics is the Eastern Cordillera or Andes chain, which without interruption extends along the entire eastern frontier of Chile, containing many peaks that tower thousands of feet into the region of perpetual snow. In its northern division the Eastern Cordillera has a mean altitude of 15,000 feet, several peaks exceeding 20,000 feet in height, while to the south the average elevation gradually declines to about 8,000 feet. Toward the north occur more than thirty volcanoes now either quiescent or wholly extinct, some in fact having lost all traces of their former craters.

Near the parallel of 41° the mainland is deeply indented by bays and the coast is studded with islands which in reality are summits of the fragmentary and sunken Coast Range. The island division begins with Chiloe, the largest of a group of the same name. Interrupted by the peninsula of Taytao and the Gulf of Peñas, the insular chain begins again with Wellington Island, the largest island north of Tierra del Fuego, and continues to the Strait of Magellan, the famous interoceanic passage that separates Tierra del Fuego from the mainland, five to thirty miles wide and 340 miles long. In Tierra del Fuego proper the Andes Mountain system terminates in the Darwin Range, 7,000 feet in elevation.

Rivers and Climate. The rivers are numerous and several have courses of no mean length. All of the streams flow directly or indirectly into the Pacific Ocean, none breaking through the Eastern Cordillera, as is the case in Peru. Since the absorption of Atacama and neighboring territories Chile includes a section of the arid region, where the river-beds are mere ravines, subject to occasional freshets. The longest river is the Biobio, 220 miles in length and navigable for barges and small steamers to Nacimiento, about 100 miles from its mouth. Other rivers of considerable length include the Cautin (199 miles), Mataquito (168 miles), Aconcagua (160 miles), Copiapo (155 miles), Maipo (155 miles), and Bueno (152 miles). Only the Cautin, Bueno, Maule, and Valdivia are of any value as commercial highways. The lakes of Chile are mostly confined to the southern section of the country, where they are numerous and in some cases extensive.

At the extreme south the climate is too humid for the raising of wheat, but the hardy vegetables mature. The temperature rarely falls below the freezing point in winter or rises above 60° in summer. The second zone, extending to 36° S. lat., has a climate not unlike that of Illinois. In the province of Valdivia, for example, the mean annual temperature is 53°. The third zone, reaching to 30° S. lat., comprises the region in which are located the large centers of population. Here the climate is healthful and delightful the year round, the temperature ranging, with only occasional exceptions, between 77° and 32°. During the winter months (June, July, and August) the rainfall is heavy, and mild northerly winds predominate, but throughout the remaining seasons the prevailing winds blow from the south. In the fourth or most northerly zone the climate is tropical, the heat is intense, and the rainfall is insignificant.

Flora and Fauna. The Chilean flora has a very large number of indigenous species. Among these are the *Skytanthus*, a dwarfish shrub with yellow flowers which constitutes the sole known species of its kind; the *Francoaceæ*, almost unknown elsewhere, yielding a black dye and a valuable drug; and certain varieties of the cactus family. Nearly 200 trees belonging to the temperate zone of South America are found in Chile alone. The more important are the carob, an enormous shade tree; the espino, an important timber tree; the great torch-thistle, the hard spines of which are used as knitting-needles; the Chilean oak, growing to a height of 100 feet and exceedingly durable; the lingue and *Peumus*, the barks of which are used in tanning leather; the Araucanian pine, a gigantic tree with an umbrella-shaped top; and the Chilean cedar or alerce, which is valuable for building purposes.

USPALLATA PASS, IN THE ANDES

The best known crossing place in the Southern Andes is the Uspallata Pass, between Chile and Argentine, which opens a way across the great chain at a height of 12,330 feet above sea-level. This is the route taken by the Trans-Andean Railroad, which will, when completed, use a tunnel of three miles, penetrating the mountains about 2,000 feet lower than the present coach road over the pass, thus avoiding many difficulties.

The fauna of Chile is more limited and less independent than the flora. The huemul, a species of deer represented in the national coat of arms,

is common. The pudu, smallest of the known varieties of deer, is peculiar to Chile. The chinchilla is common in the warmer regions and the coypu, a congener of the beaver, is found along the banks of streams. The guanaco roams over the lower mountains in herds numbering from 20 to 100. The vicuña is more rare, being almost wholly confined to the province of Atacama. Otters, wildcats, and foxes are numerous. Among the birds of Chile are the condor, turkey-buzzard, white eagle, parrot, tenca, thrush, albatross, giant petrel, cape pigeon, and the Columba. The lakes and rivers are almost destitute of fish, but the coastal waters teem with cod, crawfish, mussels, sea-otters, and seals.

Resources and Industries. The agricultural region embraces the provinces from Aconcagua to Valdivia inclusive, a fertile, well-watered area in which husbandry and stock-raising are fairly well developed, about one-half of the population being engaged in these occupations. Wheat and other cereals, tobacco, vegetables, fruits, and wine of good quality are the principal products. A zone, including the province of Arauco and certain adjacent districts, has mines of copper, iron, coal, and brick-clay, while the native Indians are mostly engaged in stock-raising, which they carry on with great success. Copper is the chief metallic product of Chile. The exclusively mineral region comprises the northern districts of Coquimbo, Atacama, Tarapacá, and Antofagasta, in which are found enormous stores of nitrates and valuable deposits of other minerals. The nitrate deposits cover an area of 225,000 acres and the annual output is enormous. In the forest belt, which extends from Valdivia southward to Tierra del Fuego, the heavy rainfall stimulates the growth of arborescent vegetation and agricultural pursuits are unprofitable. In this region, along the coast, fisheries are profitable.

Manufacturing industries are not extensively developed except in the department of Valparaiso, where there are gas-works, sugar refineries, wagon and mineral-water factories, tanneries, breweries, saw-mills, and machine shops. Chile is the leading South American State in the construction of railways. The leading articles of import are coal, silk, woolen and cotton cloth, machinery, and sugar; the exports include nitrate, copper, silver, hides, and guano.

THE SNOW-CLAD ANDES

The highest peaks of the Western Hemisphere stand as mighty bulwarks in the huge Andean barrier that separates the coast region of Chile from the great plains of the Argentine Republic. Here the snows upon the upper slopes never melt and the grandeur of the glacial valleys awes the bold explorers who venture within their fastnesses.

Historical. Chile was originally inhabited by Indian tribes called by the Spaniards Araucanians. In 1450 the reigning Inca of Peru extended his authority over Chile by a conquest which endured until the fall of Atahualpa in 1533. The first Spanish invasion of Chile in 1535 failed; but five years later Pedro de Valdivia entered Chile and, fighting his way to the interior, founded the city of Santiago in 1541. He governed for twelve years, continually harassed by the warlike natives. For 180 years from the date of the first coming of Valdivia the natives successfully waged a defensive war against the Spaniards and forced the latter to recognize their autonomy, but colonization went forward steadily.

In 1810 the people deposed their Spanish Governor and declared their independence, but in 1813 a powerful Spanish army under Paroja entered Chile and Spanish authority was reëstablished. After three years of submission the Chileans again revolted and, with the aid of General San Martin and a large force of Argentines, defeated the Spaniards at the battle of Chacabuco and on the plains of Maipo. With 1818 begins Chilean independence, and from 1833 may be reckoned the era of Chilean prosperity. Until 1879 the history of Chile is merely a record of the names of presidents, in reality dictators, chosen by a body of electors possessing a stringent property qualification. In the year last mentioned Chile engaged in a war of conquest with Peru and Bolivia. By five years' warfare Chile gained control of the rich territory of Tacna and Arica, in which lie the greatest nitrate deposits in the world, cut Bolivia off from the sea by the occupation of Atacama, and severed the Peruvian-Bolivian confederation. A dispute between Chile and Argentine over their boundaries was settled by arbitration.

Chief Cities. Santiago, the capital of Chile, is situated at the foot of the spurs of the Western Cordillera on the banks of the small river Mapocha. It ranks third in size among the cities of South America. Most of the buildings consist of but one story, as a precaution against the terrific earthquakes that frequently visit the locality. Santiago is the seat of the State University.

Valparaiso, the chief seaport of Western South America, is situated on the shore of a crescent-shaped bay Persons of foreign birth form a large part of the population and trade is mostly in the hands of English and Germans. The English language is very generally spoken by the citizens, native and foreign. Valparaiso is the center of the Chilean coastwise trade and the terminus of various great steamship lines plying between Europe and South America.

La Concepcion, the capital of the province of that name, is situated near the mouth of the Biobio River, 270 miles south of Santiago. The city is well built and has a flourishing trade through its port, Talcahuano, a fortified town about eight miles distant. It is the commercial center of Southern Chile and the chief manufacturing city of the republic. Its prosperity is due largely to the rich coal-beds situated in the vicinity

Government and Education. The present constitution of Chile was adopted in 1833. The executive authority is in the hands of a President, elected for five years by delegates who derive their powers from popular ballot. The President is not eligible for reëlection. He is assisted by a Council of State and a Cabinet of six members. Legislative power is vested in a National Congress consisting of a Senate and a Chamber of Deputies. The Senators are elected for a period of six years in the ratio of one to every three deputies. The latter are elected by the several departments and hold office for three years. For local administration the republic is divided into twenty-three provinces.

Education is free and at the expense of the State, but not compulsory. No other Spanish-American State devotes so much attention to instruction as does Chile. Secondary education is amply provided for in the National Institute at Santiago and the lyceums of the republic. Normal, agricultural, collegiate, and other special institutions of learning are scattered throughout the provinces. The interests of higher education are promoted principally in the State University at Santiago.

BOLIVIA

BOLIVIA is an Andean republic on the western side of South America and southeast of Peru. Its area is as yet indefinitely known. The most recent estimate puts it at 703,400 square miles, but these figures are subject to occasional revision as the various boundary questions are closed. With Brazil there was a bitter dispute in 1903 over the Acré region lying north of the Aquiry River, but a treaty of November, 1903, yielded the territory to Brazil and readjusted the frontier along the Paraguay River. The uncertain frontier with Peru has been referred to arbitration.

Mountains. The surface of Bolivia is naturally divided into two distinct regions—the *Sierra* or mountainous division, embracing the western part of the republic, and the *Montaña*, a vast, low plain containing the tropical forests and sparsely settled districts composing the eastern and northern sections of the country. The two main ranges of the Andes—the Coast Range and the Western Cordillera—separated in Argentine and Chile by a narrow table-land, in Bolivia broaden out and enclose one of the most spacious and elevated plateaus to be found on the globe, varying from 60 to 150 miles in width. This lofty table-land, forming an inclosed basin having no visible outlet, is known as the Alta Planicie Central. The eastern range, called the Cordillera Real or Royal Cordillera, containing rich mineral deposits, extends southeasterly with minor cordilleras diverging toward the low plains of the east, where they disappear. This chain embraces some of the highest mountains on the continent and forms one of the most massive and continuous snow-capped ranges in the world, with heights of 20,000 feet.

THE PLAZA AT LA PAZ

The capital of Bolivia owes its location at the bottom of a great mountain canyon to its origin in a Spanish settlement engaged in placer mining. The center of public activity is the open square or Plaza, a park-like expanse surrounding a pretty fountain. On alternate evenings a military band plays in the Plaza and the populace turns out in attendance. Facing the Plaza is the Government House, where Congress meets. Near it is the former palace of the Spanish governors, now used as a hotel.

Rivers and Lakes. Eastern Bolivia is the region of dense forests and navigable rivers. The eastern boundary along the Paraguay River has an elevation of 300 feet, and the great level plains rise very gradually to the foot-hills of the Cordillera, where they attain an altitude of 3,000 feet. The rivers are usually adapted to steamboat navigation. They nearly all converge, like the ribs of a fan, toward the falls of the Madeira River, making that stream one of the main affluents of the Amazon. The most important Bolivian branches of the Madeira are the Beni, Madre de Dios, Mamore, and Guapore or Itenez rivers. These rivers furnish an outlet toward the Amazon mouth for the products of the Bolivian tropical forests and are slowly taking rank as regular routes of commerce. Besides these navigable waterways of the Amazon system there are the Paraguay and the Pilcomayo rivers, both flowing south to the Atlantic Ocean. Practically none of the drainage of Bolivia flows into the Pacific Ocean.

Lake Titicaca, lying between Bolivia and Peru, is one of the wonders of the Andes Mountains. It is 120 miles long and from thirty to fifty miles wide; its greatest depth, according to Agassiz, is 925 feet. The lake, fed by melted snow and ice through nine mountain streams, is the most elevated body of water in South America, lying at an altitude estimated at from 12,500 to 12,800 feet. Connected with it is Lake Aullagas (Poopo), of about 12,000 feet elevation. There is no visible outlet for the waters of Lakes Titicaca and Aullagas.

Climate, Flora, and Fauna. The mean annual temperature in the hot, moist eastern slopes of the Cordilleras, where they are merged into the wooded plains of the Amazon River basin, is about 74° up to a height of 2,000 feet; it falls to 66° at 8,000 or 8,500 feet elevation, and to 50° on the central table-land at altitudes of from 11,900 to 12,500 feet. The snow-line varies from 15,000 to 18,000 feet in elevation. In the region of the Titicaca basin the climate is remarkably healthful and the severity of the dry winter season is modified by the waters of the lake. In the wet season, from December to May, occur frequent and terrific hail and thunder storms.

In the tropical regions of the plains and lower valleys of Eastern Bolivia the granadilla, cherimoyer, pineapple, sugar-cane, rice, and cacao flourish. Here, also, grows the coca, a narcotic plant, the dried leaves of which are chewed by Indians, soldiers, and travelers. Ebony, mahogany, rosewood, satinwood, cedar, wax, and cork trees, and palms and rubber-trees abound in the dense forests. The rubber-tree thrives especially in the valley of the Beni River. Among the numerous medicinal plants are cinchona, vanilla, jalap, and sarsaparilla. In the temperate zone fruits, cereals, and vegetables are extensively cultivated, while on the lofty table-lands is abundant pasturage for live stock.

The wild animals include the leopard, black bear, jaguar, tapir, sloth, armadillo, monkey, boa-constrictor, and alligator. Among the principal birds are the toucan, parrot, and colibri or humming-bird. In the more temperate regions horses and cattle of excellent grade are numerous; foxes and deer are also found. High up on the mountains are the haunts of the vicuña, guanaco, alpaca, and llama; here also the condor, eagle, and vulture may be seen.

Resources and Industries. In its fertile prairies, rich mines, and extensive forests Bolivia has inexhaustible but largely undeveloped treasures of wealth. The frequent political disturbances have hindered foreign capital from exploiting the known resources of the country. Gold, silver, tin, copper, bismuth, lead, coal, iron, asphaltum, and marble are found. Considerable foreign capital has been invested in the silver mines, but the gold-mining is inconsiderable. The deposits of tin are among the most valuable of the mineral resources, and copper of superior quality is mined. Salt is abundant in some localities, and mercury, platinum, zinc, nickel, and deposits of sulphur also occur. Emeralds, opals, lapis lazuli, and other precious stones are found.

There is unequaled pasturage in the pampas and on the uplands, and stock-raising is an important industry; millions of sheep graze on the table-lands, and cattle, llamas, ponies, and mules are numerous on the plains. The making of a coarse woolen cloth is one of the few manufacturing operations of the country. In some districts the staple crops, as wheat, maize, barley, beans, and potatoes, are raised under irrigation, though not in sufficient quantities for export. Potatoes and quinoa are the staple food of the people. A superior quality of cacao is grown, and coca is a very valuable crop. Tobacco and vanilla flourish in Santa Cruz; cochineal comes from Guapay, and

cocoanuts and dates abound in various regions. Forests of india-rubber cover extensive tracts in the plains and scattered areas in the Cordillera; valuable woods and cinchona bark are found.

Bolivia has no seacoast, but by a treaty of June, 1903, Chile conceded to it the use of a port for trade. Its exports and imports pass chiefly through Mollendo in Peru, Arica and Antofagasta in Chile, and the river ports Puerto Suarez and Villa Bella. The chief imports are cotton and woolen goods, cattle, provisions, machinery, hardware, wines, spirits, and clothing. The exports are chiefly silver, tin, copper, and other mineral products, rubber, coffee, coca, and cinchona bark, besides saltpetre and nitrate. Trade of the retail sort is very largely in the hands of German merchants.

The transportation facilities of Bolivia are as crude as in the neighboring mountain republics. The mule and llama are the usual modes of conveyance, and beaten paths of the mule trains are the principal highways. The chief railroad line connects the mining center of Oruro with the Chilean seaport of Antofagasta. It is the best and most traveled route from the coast region to the interior. Concessions have been given for a road to connect with the Argentine system and for another to extend from Santa Cruz to some town on the Paraguay River. The former is under construction. Besides these the republic, in its treaty of November, 1903, with Brazil, binds itself to build new roads near the Brazilian frontier for international commerce.

An educational system has been well established, the schools being supported by the municipalities where located. Primary instruction is free and nominally obligatory. There are many private schools. For advanced instruction there are seven universities and eight colleges, besides several clerical seminaries.

Historical. The Bolivian plateau was formerly a part of the great Peruvian Empire of the Incas. With the overthrow of the Indian power it passed under Spanish rule and became known as the region of La Charcas. The Indians were drafted into forced labor in the silver mines and treated with great cruelty. In 1780 the Indians rebelled, but the revolt was suppressed. When the Argentine rebellion reached a measure of success in 1809 the La Charcas region was invaded in an effort to dislodge the Spanish forces. Constant warfare then followed until 1825, when General Sucre became master of the region and it assumed the name of Bolivia in compliment to Bolivar, the Liberator, whose troops were then in control and whose hand presented the republic with its first constitution.

MOUNT ILLIMANI, NEAR LA PAZ

Plainly visible from the Bolivian capital is the ice-capped Illimani, whose existence so near them is a source of pride to the people of La Paz. The Indians of the surrounding region hold still to a faint belief in the old legend that a god lives in glacial splendor upon its summit, and in spite of their Christianity view the distant peak with an inherited reverence.

BOATS MADE OF STRAW, LAKE TITICACA

Upon the low plains and hills that surround Lake Titicaca there is no timber except some stunted pines. The Indians have accordingly adopted a curious substitute for building boats with which to coast the lake shore. Bunches of rushes or of barley straw are firmly bound and then fastened strongly to a frame. The larger boats of this kind can carry two or three tons of freight. The defect of the craft is the tendency to become water-logged after a little use.

From the time of independence the history of Bolivia has been a series of revolutions which have had much to do with the failure of the nation to make advances. In 1878 the party in power varied the form of trouble by engaging in war as an ally of Peru against Chile. When defeat followed the republic lost the narrow strip of seacoast which had been its sole outlet to the world's commerce. In 1880 a new constitution was formulated, which has been repeatedly suspended by various military uprisings and revolutions.

Cities. La Paz is situated 12,226 feet above sea-level and surrounded by mountainous walls thousands of feet high. Since 1900 the government has been carried on from La Paz, although the city is not the legal capital of the nation.

Cochabamba, the capital of the province of the same name, has an elevation of 7,244 feet. It covers a large area, and the houses, rarely exceeding one story in height, are surrounded by gardens. The place is also known as Oropesa. A university is located here.

Government and Education. The present constitution of Bolivia dates from October 28, 1880. According to its provisions the executive authority is vested in a President elected for a term of four years by direct popular vote and not eligible for reëlection. The legislative power is vested in a Congress of two elective chambers—the Senate and Chamber of Deputies. There are two Vice-Presidents, and a Ministry divided into five departments. The republic is divided into nine departments and an area of national territory. Over each department is a Prefect, holding administrative and military authority. The national territories, extensive but very sparsely populated, are governed by two officials styled Delegates.

Sucre, the official capital, having an altitude of 9,200 feet, occupies a healthful and pleasant position close to the Cachamayo River. It owes its importance to the rich agricultural region by which it is surrounded, and to platinum mines near it.

Potosi is the center of the silver-mining industry and once controlled the money markets of the world, being, in the 17th century, the largest city in the Western Hemisphere, with a population of from 100,000 to 160,000. It has an elevation of 13,325 feet.

Oruro is situated near the northern end of Lake Aullagas, not far from the abandoned silver mines to which its former prosperity was due. Its present importance is based on the existence of tin mines.

PERU AND ECUADOR

PERU

PERU lies on the western side of South America. Its length along the Pacific Coast is about 1,500 miles. Its area, now very indefinitely known, is estimated at about 695,000 square miles. A vast tract along the northern boundary is in dispute with Ecuador and Colombia. On the south the provinces of Tacna and Arica are occupied by Chile. The Brazilian frontier is unfixed as yet, and the Bolivian has been referred to arbitration.

Surface Features. The surface of Peru may be divided into the Coast, the Sierra, and the Montaña regions. The Coast region is an arid zone. The Sierra has mountain ranges and elevated plateaus with warm, fertile valleys and broad, deep rivers. The mountain system consists of three ranges, the Maritime and Central cordilleras and the Eastern Cordillera or Andes proper. The narrow space inclosed between the Maritime and Central Cordilleras consists mainly of a cold, elevated tract known as the *puna*. In the southern extremity of the Western Cordillera are a considerable number of extinct or quiescent volcanoes, some of which exceed 20,000 feet in altitude. Misti, the best known of the group, rises to a height of 20,320 feet. North of this are Sara-Sara (20,000 feet), Chachani (19,820 feet), and Achatayhua (18,700 feet), while south of it rise Ubinas, Huaina-Putina, and Tutupaca. East of the Andes is the *Montaña*, a region covered with tropical forests and traversed in every direction by great streams. It comprises the subtropical slopes of the Andes and the distinctly tropical Amazonian plain.

The rivers that flow into the Pacific are small and short streams, the Chira and Piura being the most important. The streams flowing eastward generally have their sources in the *puna*. Among them is the Marañon, which is the chief of the headwaters of the Amazon. The main affluents of the Marañon are the Putumayo, Huallaga, and Ucayali rivers. There are a large number of lakes in Peru. Lake Titicaca is on the boundary between Peru and Bolivia.

Resources and Industries. Of all the resources of Peru agriculture has attained the greatest development; the principal products are cotton, coffee, sugar, and cocoa. The chief coffee-growing region is Central Peru. The sugar industry is confined chiefly to the coastal plantations. Wool from the alpaca and from sheep is largely exported. Other important products are cocoa, rice, tobacco, wines, spirits, maize, india-rubber, cinchona, dyes, and medicinal plants. The Sierra is the region of greatest mineral wealth, containing nearly all varieties in abundance. The coast is rich in gold, silver, lead, petroleum, copper, coal, sulphur, salt, nitrate, lime, magnesia, and borax. In the *Montaña* the washing and mining of gold are important industries. Emeralds, rubies, turquoise and diamonds are found. The guano-beds located upon adjacent islands are now practically exhausted.

Manufacturing industries are developing slowly. At Lima and Arequipa and in the neighborhood of Cuzco blankets, coarse woolen and cotton fabrics are manufactured. Callao has match, soap, and candle factories, Lima produces beer and artificial ice, and several towns have small boot and shoe factories. Panama hats are made by the Indians near Paita and Piura from a reed which grows in Ecuador. Peru is deficient in good roads and has few railways. The chief cities are Lima, the capital, Arequipa, a cathedral town, Cuzco, center of a rich agricultural section, and Callao, whose well protected harbor is one of the safest on the Pacific coast.

THE HARVARD ASTRONOMICAL OBSERVATORY AT AREQUIPA, PERU

Arequipa, famous in Peru for its earthquakes and its revolutionary spirit, is splendidly adapted to astronomical work because of its elevation and the dryness of the atmosphere. On account of its advantages the city was selected by Harvard University as the site for an observatory. No other spot in the world, it is said, is so well adapted for this work. By photography the existence of many previously unknown stars has been revealed and the accuracy of the scientific observations at Arequipa has been a potent element in the development of modern astronomy.

Government and History. The republic is divided into eighteen departments and two provinces additional. The departments are each subdivided into provinces. The present constitution of the republic was proclaimed in 1856 and revised in 1860; it is modeled on that of the United States. Legislative power is vested in a Senate and a House of Representatives, the latter composed of Deputies from the provinces and the former of Senators returned by the departments according to the number of provinces. The executive authority is reposed in a President elected for four years and not eligible for the succeeding term. The President exercises his authority through an appointive Cabinet of six Ministers.

Elementary education is compulsory for both sexes and is gratuitous in the municipal public schools. High schools, at which a small fee for instruction is exacted, are maintained by the state in the departmental capitals, and there are several colleges at different places. The University of San Marcos, chartered in 1551, is the oldest in America.

Peru was until the 16th century the seat of a powerful native kingdom, ruled by a dynasty called the Incas. In 1532 Pizarro destroyed the Inca power and Spanish rule began. Peru then became known as a great source of wealth from silver mines, and was exploited with great cruelty to the native people. In 1821, led by San Martin, the Chilean liberator, a revolt began, followed by independence. Since then the republic has led a turbulent existence, owing to revolutions. War with Chile in 1879-83 ended with defeat and loss of territory.

ECUADOR

Ecuador, the smallest of the Andean states, is bounded on the north by Colombia and on the south by Peru; the eastern frontier is a disputed tract contiguous to Colombia, Brazil, and Peru. The area actually occupied is about 116,000 square miles, but Ecuador claims an area of about 276,000 square miles. The Galápagos Archipelago, thirteen volcanic islands lying about 550 miles from the coast, has been occupied by Ecuador since 1832.

Mountains and Rivers. The western section of Ecuador is traversed from north to south by the Andes Mountains, which here are largely volcanic. The main ridge of this vast range contains some of the loftiest peaks of the Andean system, including Chimborazo (20,498 feet) and Illiniza (17,380 feet). Farther east is a long line of volcanic summits, culminating in Cotopaxi (19,613 feet), besides many other immense volcanoes, some of which are extinct, others smoking and dormant, or, like Cotopaxi, in unceasing activity. Between the main mountain range and the line of volcanoes is a series of basins varying in dimensions and elevation, the altitude of the basin of Quito exceeding 9,300 feet.

Of the Pacific drainage system the principal rivers are the Esmeraldas and Guayas. The former drains an area of about 9,000 square miles; it is navigable a short distance, but is of little commercial value. The Guayas River, on the other hand, is the largest river on the Pacific side of South America and is of great economic importance. Its estuary, which forms a large, safe harbor, merges into the Gulf of Guayaquil. The greater number of the rivers of Eastern Ecuador are either direct or indirect affluents of the Marañon, on the southern boundary, one of the head streams of the Amazon River.

Climate, Flora, and Fauna. The equatorial position of Ecuador, combined with its variations in surface elevation, determines the climate. The limit of perpetual snow is in general from 15,700 to 15,900 feet above sea-level. On the plains around Quito sugar-cane, cotton, and maize are cultivated, and at an altitude ranging from 6,000 to 10,000 feet the cereals and fruits of the north temperate zone. In the lowlands cacao, coffee, rice, cotton, pepper, tobacco, india-rubber, gum copal, vanilla, sarsaparilla, pineapples, pomegranates, oranges, and lemons are produced. Medicinal plants are especially numerous. The pita or American aloe is among the most valuable of the natural products. The vast eastern province of Oriente is covered with dense forests. The llama is found as far north as the Riobamba district. In the eastern forest the tapir, jaguar, puma, peccary, and venomous snakes are common.

INDIANS' HOUSES, GUAYAS RIVER

Along the river valley that extends from Guayaquil to the upper plateau levels are found the quaint little homes of the Indians, who live here as simply as their ancestors lived when the Spanish conqueror bent them to his yoke.

MARKET PLACE OF RIOBAMBA, ECUADOR

The name of this town will ever be associated with the awful calamity of 1797, when the older city of Riobamba, three leagues from the present site, was wiped out by a fearful earthquake that changed the face of nature throughout the region. The present city is unimpressive. It has broad, pleasant streets, but, except on the Plaza, there are few houses over one story in height. The regular market day, when the rural population comes to town for trade and pleasure, is one of its most important social events.

Resources and Industries. Agriculture is in a very rudimentary condition. The people are dependent upon the United States and Chile for the greater part of the wheat and flour consumed. The principal wealth of the country is its product of cacao, which constitutes about three-fourths of its exports. The raising of live stock is confined mainly to supplying the needs of domestic consumption, the hides being sent chiefly to the United States. Rubber forms an important article of commerce, and vegetable ivory, coffee, cinchona bark, bamboo, tamarinds, tobacco, and rice are also exported.

Little attention is given to mining, although gold is obtained in the extreme north. The resources of copper, iron, lead, coal, and petroleum are abundant but almost wholly undeveloped. The best known branch of the manufacturing industry is the making of Panama hats, braided by the coast Indians from the fine straw of the toquilla. At Guayaquil there are a few manufactories for woolen and cotton goods, lumber, chocolate, soap, and malt liquors. One-third of the exports are sent to France. The total annual trade is small. There is one short railroad in the country, which will later connect Guayaquil with Quito.

People and Government. Of the population of Ecuador not more than one-twelfth are of pure white blood. The remainder are Indians or mixed races. The chief cities are Quito, the capital; Guayaquil, the center of foreign trade; Cuenca, and Riobamba. The Roman Catholic faith is the established religion. A national educational system exists, but is poorly represented in the rural sections. The executive authority is vested in a President, elected directly by the people for a term of four years. The President is assisted by a Cabinet of five Ministers, who with seven other members form the Council of State. There is a bicameral congress.

CENTRAL AMERICA

CENTRAL AMERICA is a political term under which are grouped the six republics of Guatemala, Salvador, Honduras, Nicaragua, Costa Rica, and Panama, and also the Colony of British Honduras. Central America, as thus defined, has an aggregate area estimated at 208,400 square miles, or about two-thirds the size of Texas, with a population whose density is only slightly less than that of the United States. The popular language is Spanish.

Surface Features. The Sierra Madre of Mexico, which in the Isthmus of Tehuantepec dips to within less than 1,000 feet of the level of the sea, immediately rises again and in Guatemala attains a mean elevation of about 7,000 feet, with volcanic peaks, such as Tajumulco, Tacana, and Acatenango, rising to a height of 14,000 feet. This volcanic coast range, separated from the sea by the low Pacific plain, is the first link in a more or less broken chain that continues under various names to the Isthmus of Panama. The greatest altitudes outside of Guatemala are in Costa Rica, where Pico Blanco and the active volcanoes of Turialba and Irazu are more than 11,000 feet above sea-level. In Panama the mountain system, although very irregular in its topography, becomes practically one chain, connecting with the Andean Cordillera.

GOVERNOR OF THE CANAL ZONE

Charles E. Magoon, of Nebraska, who had been connected with the American administration of Cuba during the military occupation, was appointed to the governorship of the Canal Zone in 1905.

At two points are notable depressions traversing the continental watershed. In Costa Rica is the Cartago depression. In Nicaragua is the great valley in which lie Lake Nicaragua and Lake Managua. It was through this latter gateway that the route of the proposed Nicaragua interoceanic canal was planned. In Panama the continental watershed is cleft by the Culebra Pass, through which the Panama Canal will be built Owing to the narrowness of the coastal plains none of the rivers of Central America is long or of any great value for navigable purposes, but rafts and small schooners are used on many of them, however, for considerable distances. Among the chief rivers are the Usumacinta in Guatemala, the Belize in British Honduras, the Lempa in Salvador, the Ulua in Honduras, the Rio Coco of Northern Nicaragua, the San Juan along the Nicaragua and Costa Rica frontier, and the Tuira, Bayamo, and Chagres in Panama.

THE CULEBRA CUT, ON THE PANAMA CANAL

Across the gigantic mountain barrier that Nature has placed between two oceans, the canal-builders have cut a passageway to serve the purposes of men. A narrow valley, its sides curiously terraced where the earth has been removed to deepen the cutting, is the visible result of the builders' work. Through this cleft in the continental watershed, when the work is completed, will extend the summit-level of the canal, serving as a link between the two tide-level portions of the great waterway.

Climate, Flora, and Fauna. Central America, like Mexico, has a climate dependent upon altitude rather than latitude, and since the table-lands are scattered, a generalization respecting the climate is practically impossible. Here, however, as in Mexico, the three zones, hot, temperate, and cold, conditioned on elevation, are distinguished. The mean annual temperature at sea-level is about 80°. The annual variation is slight, the difference in the mean temperature between the hottest months, April and May, and the coldest, December and January, seldom exceeding twelve degrees. In general, the Atlantic slopes, so disposed as to interrupt the east and northeast trade-winds, receive more moisture than the Pacific slopes of the region.

Central America, because of variety in its climatic conditions, has a diversified flora. Trees of great value for industrial uses abound, and there is an immense variety of medicinal plants, fiber plants, oil-plants, tanning and dyeing woods, tinctorial plants, spices, aromatic herbs, food-plants, and fruits. The forests end at an elevation of 12,500 feet and artificial cultivation of the soil at 10,500 feet. Animal life in Central America is relatively as abundant as vegetable, and both flora and fauna are richest and most varied in the warm, moist uplands. The principal carnivora are the cougar, jaguar, and smaller feline mammals; wild hogs, deer, monkeys, squirrels, coyotes, and opossums abound.

Historical. One of the lieutenants of Cortés, Pedro de Alvarado, by taking advantage of native dissensions, accomplished the conquest of the greater part of Guatemala and Salvador between 1523 and 1525. Panama in 1519 and Costa Rica in 1522 had already been occupied by Spaniards, and Honduras was taken in 1523. Nicaragua was occupied about the same time as Guatemala. The colonies remained under Spanish rule until 1821, when five of them declared their independence. Early in the following year they became a part of the Mexican Empire of Iturbide, upon whose fall in 1823 they formed a union as the United Provinces of Central America. Panama revolted in 1824, joining its political fortunes with the Colombian Republic of South America. The Central American coalition was broken in 1839 and the provinces were resolved into separate republics. Numerous attempts have since been made to restore the union, but in vain. Panama remained a part of the successive republics which occupied the Colombian plateau, except for short intervals of independence in 1840 and 1857 In 1903, however, angered by Colombian obstruction to the Panama Canal project, it seceded and assumed independence.

British sovereignty in the colony of British Honduras had its origin in settlements of logwood-cutters along the coast in the 18th century. The British rights were confirmed subsequently by treaty with Spain in 1783. Formerly a dependency of Jamaica, it was made a separate crown colony in 1884. Until 1850 the British government claimed a protectorate over the Mosquito Indians of Eastern Nicaragua, but in that year abandoned the region.

PANAMA

The Republic of Panama, with an area of 31,570 square miles, occupies the isthmus that connects the continents of North and South America by a narrow neck of land

Resources. The country is rich in natural resources, but development as yet has not been extensive. Along the coast the land is rich and is especially adapted for the production of tropical products. Near the Chiriqui Lagoon large banana plantations have been established. The cultivation of coffee, rubber, and cacao is being developed for export purposes. From the tropical forests of the coast region are obtained cocoanuts, Brazil nuts, mahogany, dyewoods, and drugs. In the more elevated regions of Panama are plateaus with open plains, suitable for grazing purposes, and pastoral industries have already made a fair beginning. The republic is supposed to contain great mineral wealth. Gold and manganese ores are obtained, but the mountainous areas await exploration. Pearl-fishing is carried on profitably at the Pearl Islands in the Gulf of Panama, and at Coiba Island to the west. Mother-of-pearl and tortoise-shell are exported.

THE CATHEDRAL AT PANAMA

No prominent city of the Spanish-American countries is without its cathedral. That of the city of Panama shows an imposing front flanked with two enormous towers. The building is not without artistic merit and its effectiveness is much heightened by the excessive plainness of the buildings that stand near. Tourists find it an attractive feature.

The backwardness of all industry in the isthmian republic is due alike to the lack of capital and of transportation. There are no well-kept wagon roads, navigable streams are few, and the only railroad is that which crosses the isthmus. The exports of Panama are mostly bananas, coffee, and other tropical products. The ports of the republic are Panama, Agua Dulce, Pedregal, Montijo, and Puerto Mudis on the Pacific side, and Colon, Bocas del Toro, and Porto Bello on the Caribbean. The trans-isthmian road is forty-seven miles long. The annual movement of merchandise over the railroad represents practically the trade between Europe and the Eastern United States on one hand and the Spanish-American coast from Guatemala to Peru on the other. Cables connect Colon with the United States and Europe, and Panama with the Pacific coast of the United States and the west coast of South America.

RESIDENCES AT COLON, PANAMA

The city of Colon, created by the trans-isthmian railroad, of which it is the terminus, has the distinction of being one of the most unhealthful towns of the two Americas. It is situated in the coastal lowland and is surrounded by tropical swamps and lagoons. The best of the residences are merely small frame houses.

The government of the republic consists of a President, chosen for four years, whose work is carried on through a cabinet of ministers, with a legislative body of thirty-two members called the National Assembly. Education is in a backward condition. The only city of importance is Panama, situated at the head of the Gulf of Panama.

THE CANAL ZONE

The Canal Zone is a district forming an integral part of the Republic of Panama, but placed by the latter, through treaty arrangements, under the actual control and jurisdiction of the United States. It consists of a belt of territory ten miles wide, extending across the isthmus from the city of Colon to that of Panama, following the surveyed route of the interoceanic canal. Its total area is estimated at about 500 square miles.

Government. The United States holds in perpetuity the use of the Zone, the exclusive control of the strip for police, judicial, sanitary, and other purposes, together with such tracts as may be needed for subsidiary canals, and certain shores and islands in the Gulf of Panama. The cities of Panama and Colon are excepted from this grant. In addition to the right of political jurisdiction, acquired from the Panama Republic, the United States Government has extensive property interests within the Canal Zone, comprising the realty, rights, and improvements connected with the canal work, together with the stock of the Panama Railroad Company. The government of the Zone is vested in the Isthmian Canal Commission, composed of seven members, one of whom is designated by the President to act as executive.

The Panama Canal. The interoceanic canal is to be forty-nine miles long, 150 feet wide, and thirty-five feet deep, crossing the continental watershed at a point about eight miles from Panama. As now planned, the canal will start from Colon, where the harbor will be deepened and improved. From Colon it will extend inland through low, marshy ground a distance of fourteen miles to Bohio, a village in the Chagres Valley Here a gigantic dam will collect the waters of the Chagres in an artificial basin called Lake Bohio, having a length of fourteen miles. The surface of the lake will form the northern part of the summit level of the canal, and at its southern end will be another portion of the summit level, namely, the celebrated Culebra section, a gigantic cleft that pierces the continental watershed by a cutting 286 feet deep and eight miles long. Immense locks, built at each end of the summit level, will raise and lower vessels to and from the level of the sea. The Pacific tide-water level will extend through the valley of the Rio Grande River about nine miles to the deep-water portion of Panama Harbor.

THE ANCHORAGE IN THE HARBOR OF PANAMA

The approach to Panama harbor is lacking in elements of beauty. The shores of the mainland extend away to the right and left with a persistent flatness, hardly relieved by the background of low hills. Lying offshore and breaking the monotony of the harbor view somewhat is a little cluster of islands, the pleasing effect of which is neutralized at low tide, however, by the presence of ugly mud-flats and coral reefs.

COSTA RICA

Costa Rica, having an area of 23,000 square miles, extends from the Caribbean Sea to the Pacific Ocean, stretching from northwest to southeast at the narrowest portion of the Continent north of the Isthmus of Panama, and adjoined by Nicaragua on the north.

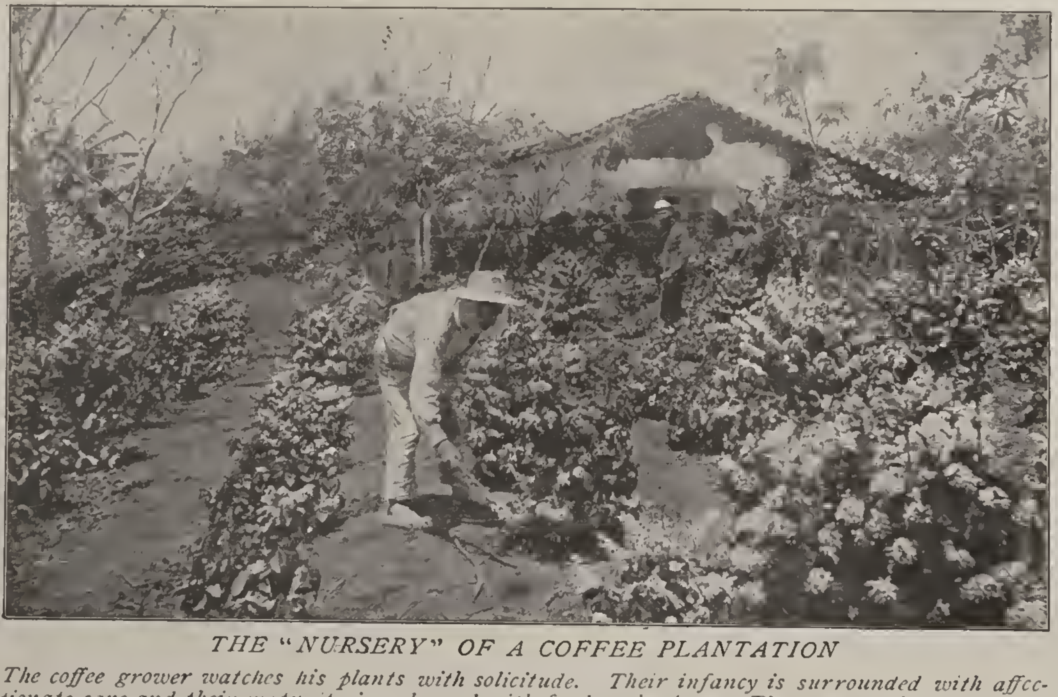
General Features. The leading industry in the republic is agriculture, coffee and bananas being the chief products. Sugar-cane, cacao, tobacco, and all tropical and temperate zone crops grow luxuriantly at their appropriate elevations. Live stock thrive well and the forests are rich in economic woods, but neither resource is largely developed. The mineral veins of the mountains are also comparatively undeveloped. Gold, silver, copper, lead, coal, and many other metals occur, but although the government offers liberal inducements little mining is done. The most important exports are coffee and bananas; other exports are cabinet woods, gold and silver, skins, and rubber.

NATIVE HOME NEAR REVENTAZON RIVER, COSTA RICA

Country life in the tropic lowlands of Central America is marked by the same simplicity as in Hawaii and the Philippines. As in those countries the ordinary native home is a mere hut, covered by a thatched roof and raised from the ground on posts, to prevent the intrusion of unwelcome creatures of the soil. Such homes as these are found by the traveler in the depths of the valleys, embowered in vegetation and usually overshadowed by the giant palms that are characteristic of the flora.

The chief city is the capital, San José, situated at an elevation of 3,757 feet. The city is the seat of a university and an observatory. The other principal cities are Cartago, situated in a fine valley at the foot of the volcano of Irazu; Heredia, and Alajuela, each the seat of government for the department in which it is situated. The chief seaports of the country are Punta Arenas and Limon, the former situated on the Gulf of Nicoya, on the Pacific Coast, and the latter located on a harbor of the Caribbean littoral. Both of these towns are termini of railroad lines leading to the interior.

The government is normally carried on by a President, chosen for four years, and a Chamber of Representatives, whose members, about thirty in number, are elected by local electoral assemblies. The Roman Catholic is the State religion, but toleration exists. Education is well supported by public grants.



THE "NURSERY" OF A COFFEE PLANTATION

The coffee grower watches his plants with solicitude. Their infancy is surrounded with affectionate care and their maturity is welcomed with fond enthusiasm. The "nursery" is a portion of a plantation where plants are raised from the seed. Here they are carefully guarded and nourished during their first year, at the close of which they are ready to be transplanted.

NICARAGUA

Nicaragua, a republic which has an area estimated at 49,200 square miles, occupies a position immediately south of Honduras, the common frontier of the two nations being formed by the Coco and Negro rivers and the mountains that lie between the streams. Its Caribbean coast-line is 280 miles long; its Pacific seaboard, about 200 miles.

Natural Resources. Nicaragua has a broader expanse of alluvial land than is possessed by any other of the Central American republics

BISHOP'S PALACE, SAN JOSÉ

The bishop of San José is the chief clerical dignitary of the republic of Costa Rica. His home is the Episcopal Palace, a plain but imposing structure connected with the cathedral and facing the former plaza, now a pretty little park.

The country lies on the gentle Atlantic slope of the cordillera and is abundantly watered by broad rivers that are fed by an interlacing network of mountain streams. The republic possesses a variety of agricultural resources, rich forests, and considerable mineral wealth. Little of the land, comparatively speaking, is under cultivation, but there is a large area especially adapted to coffee culture, while bananas thrive on the Caribbean coast; the cultivation of these two products, accordingly, is extending. The wild rubber trees of the forests have been wastefully tapped, and an effort has been made to recover the loss by establishing rubber plantations. The growing of sugar-cane is making some advance, cotton of fine fiber is produced, tobacco enough for home consumption is raised, and the output of cacao partially supplies the domestic market. Large herds of cattle are owned in the republic and the export of hides is considerable. The minerals found in the rich deposits in Nicaragua include gold, silver, copper, lead, iron, zinc, opals, coal, gypsum, alum, sulphur, and saltpeter. The mines now operated produce gold and silver.

Corinto, on the Pacific Coast, is the chief port of Nicaragua trade. Next in importance are El Bluff (Bluff City), near Bluefields, and San Juan del Norte or Greytown. Other ports are Rivas, near Lake Nicaragua, Cape Gracias in the extreme northeast, and San Juan del Sur, on the Pacific Coast. Managua is the capital of the republic.

The government of Nicaragua is vested in a President, elected for a term of four years, assisted by a council of ministers. The Congress consists of a single chamber with members elected for two year terms. There are universities at Leon and Granada.

HONDURAS

Honduras, possessing an area of 46,250 square miles, is the broadest of the Central American States. Its territory extends northeast and southwest across the widest portion of Central America, having a frontage of seventy miles on Fonseca Bay, an inlet of the Pacific Ocean, and one of 350 miles on the coast of the Caribbean Sea.

Features and Resources. The soil and climate of Honduras, on the upland plateaus as well as in the fertile lowland country, favor stock-raising and the production of the staple crops of both the temperate and the torrid zones. Coffee, tobacco, cotton, maize, and sugar-cane of excellent quality may be raised. Bananas, which are produced in large quantities on the Atlantic Coast, are the principal product. The forests abound in valuable economic woods, medicinal herbs, gums, resins, and fiber plants. In mineral resources Honduras is one of the richest of Central American countries. Silver is the most abundant mineral, but large deposits of gold occur on the Atlantic slope, and placer-mining in the northern rivers is common. Rich copper deposits and extensive beds of high-grade iron ore exist, but are undeveloped. Lead, zinc, antimony, and nickel are found in almost every section. Deposits of ligniteand more perfectly carbonized coal exist.

The principal seaports are Amapala, on the Pacific Coast; Puerto Cortés on the Atlantic. and Omoa, Laceiba, and Trujillo, also on the northern coast. The capital is the ancient city of Tegucigalpa, which is the seat of a university. Juticalpa is a mining center of importance.

The executive authority of the Republic is in the hands of a President, elected for four years. A Council of Ministers is charged with the departmental administration of government. Legislative functions are held by the Congress of Deputies. Although the Roman Catholic is the prevailing religion, freedom of worship is guaranteed. Instruction is free, compulsory, and secular.

VOLCANO MOMOTOMBO, NICARAGUA

Momotombo, overlooking Lake Managua, is one of those uncertain centers of earthquake, whose presence along the proposed route of the interoceanic canal across Nicaragua helped to turn the scale in favor of the Panama project.

TEGUCIGALPA, HONDURAS

The capital city of Honduras lies among the mountains, almost cut off from intercourse with the rest of the world. On its southern side are a number of picturesque stone bridges, giving entrance to the city across the Rio Grande.

ANCIENT RUINS, HONDURAS

At Coban, in Honduras, are sculptured ruins indicating the former presence of a civilized race, capable of erecting palaces and temples. The district is now desolate; the ancient empire has perished so utterly that its remains are puzzles to antiquarians who view them.

SALVADOR

Salvador has an area of 7,225 square miles, being the smallest State of Central America and the only one without an Atlantic seaboard. The coast-line, 139 miles long, is indented by three large bays and a number of smaller ones, affording convenient and safe anchorage for shipping.

General Features. The development of the rich resources of Salvador is only relatively in an advanced stage. Agriculture, the chief industry, is carried on in primitive fashion. The principal agricultural products include coffee, which thrives in the uplands; indigo, growing best in a barren, rocky soil; sugar-cane and tobacco, flourishing luxuriantly almost everywhere and fully supplying the needs of the home market; and cacao, cotton, cereals, and rice. Cotton-growing for export is encouraged by a government bounty. The forests produce india-rubber, the so-called Peruvian balsam, mora or fustic, supplying a yellow dye; mahogany, ebony, cedar, grenadillo, and other cabinet woods; and pitch-pine and ceiba, besides other marketable products. Gold, silver, copper, lead, iron, tin, mercury, and coal form the list of mineral resources.

The chief city and capital is San Salvador, but Santa Ana exceeds it in population. The republic possesses in La Union one of the best seaports on the Pacific Coast of Central America; its landlocked harbor is an indentation of Fonseca Bay. Other ports are Acajutla, Libertad, and El Triunfo.

The constitution of the republic vests executive functions of government in a President, elected for four years, assisted by an administrative council of four members. The legislative authority rests with a Congress of seventy deputies, elected by popular suffrage. Education is free and compulsory. There is a national university.

GUATEMALA

Guatemala has 48,290 square miles of area, and is the northernmost of the independent States of Central America. It extends from sea to sea, with a coast-line of about 115 miles on the Gulf of Honduras and one of about 162 miles on the Pacific Ocean.

Natural Resources. The soils of Guatemala, in general very fertile, are of extremely varied composition, consisting of alluvial detritus, and volcanic material in a more or less advanced stage of decomposition. The principal crops are coffee, sugar-cane, bananas, cacao, and tobacco. Wheat, maize, and beans are generally raised. The high plateaus include large areas of grazing lands. Among the tropical woods are found considerable quantities of merchantable mahogany.

AT SONSONATE, SALVADOR

The recurring market day, when booths are set up in the plaza before the great church, and farmers come to town, is a local event of considerable importance in the lesser Central American cities.

Guatemala has gold-mines on the northern bank of the Motagua River and silver mines south of that stream, but the region is not rich in the precious metals, and its undoubted wealth in other minerals has not been developed systematically. Copper, coal, manganese, lead, antimony, alum, sulphur, and salt occur. As for manufacturing industries, the few that exist are devoted to the supplying of local needs. The principal articles of export are coffee, sugar, bananas, rubber, hides, and cacao.

The most important city of the republic is the capital, Guatemala. Quezaltenango, a departmental capital, is the second city in industrial importance. Other interior towns of note are Coban, Totonicapam, and San Pedro. The principal ports on the Atlantic Coast are Livingston and Puerto Barrios, the latter being a railway terminus. San José is the chief port on the Pacific, while Champerico and Ocos are ports of lesser importance.

STREET SCENE IN THE CITY OF ANTIGUA GUATEMALA

In its appearance Antigua Guatemala is a typical Central American town. Built in the shadows of two volcanoes, its whitened walls show picturesquely distinct against the dark green background of the vegetation that mantles the mountain sides. Three times since the Spanish conquerors founded the city in 1543 the pent-up fury of the peaks has reduced the city to ruin, but each time it has risen to new life. Even to-day the visitor may see great rents in ancient walls telling of past disasters.

The executive power is vested in a President, elected for six years and not eligible for the ensuing term. Legislative authority is vested in a National Assembly and a Council of State. The prevailing religion is the Roman Catholic, but all creeds enjoy liberty of worship. Education is free and compulsory.

BRITISH HONDURAS

The Crown Colony, British Honduras, with an area of 7,562 square miles, lies on the eastern side of the Peninsula of Yucatan, between the Hondo and Sarstoon rivers.

Resources and Trade. Although the soil is exceedingly fertile, only about 60,000 acres are under cultivation, the historic industry of forest exploitation still being the foremost occupation. Coffee, bananas, plantains, sugar-cane, and cocoanuts are the principal agricultural products. The forests in the regions easily accessible from the coast have been largely denuded of their valuable timber, but the interior tracts of virgin forest contain immense stores of wealth, including mahogany, pine, cedar, rubber, rosewood, lignum-vitæ, satinwood, and many other varieties of trees, besides medicinal herbs, dyewoods, and spices. Gold-bearing quartz has been discovered in the southwest, but there have been no active mining operations. The pearl-fisheries of the colony are of increasing value. The chief exports are mahogany, logwood, fruit, coffee, and sugar.

THE CATHEDRAL, ANTIGUA GUATEMALA

Church architecture in Guatemala tends to avoid towers as too unstable for use where earthquakes occur. The cathedral of Antigua Guatemala is an attractive example of the style of building that is preferred in this country.

The only town of importance in British Honduras is Belize, the capital, at which vessels discharge cargoes by means of lighters. The town lies at the mouth of the Belize River and has a harbor protected by islets and coral reefs Corosal, in the north, and Punta Gorda, in the southern part of the colony, are ports of local importance. The colony is administered by a Governor, appointed by the British Crown and assisted by an Executive Council of five members and a Legislative Council of eight members.

MEXICO

THE REPUBLIC OF MEXICO (Méjico) occupies that portion of the North American Continent situated between the United States and the Central American republics. Almost two-thirds of the northern frontier (1,136 miles) is formed by the Rio Grande River, the boundary between Mexico and the State of Texas. Mexico's greatest length, from southeast to northwest, is 1,900 miles; its greatest width, from east to west, 750 miles; at its narrowest point, the Isthmus of Tehuantepec, the distance is about 134 miles from ocean to ocean. Its area, including that of adjacent islands, is 767,274 square miles.

D. PORFIRIO DIAZ

President Diaz, who succeeded President Juarez, in 1876, has used executive power to maintain quiet and develop commerce. To him more than to anyone else Mexico owes the prosperity of the past twenty years.

Mountains. The mountain ranges that diversify the surface of Mexico are central between the Andes and the Rocky mountains, in the grand Cordilleran chain that stretches across two continents from Cape Horn to the Aleutian Islands. The great ridge, which rises from near sea-level (150 feet) at the Isthmus of Panama, extends through Mexico to Arizona in the form of an immense plateau.

The sierras of the west approach the coast more nearly than do those of the east, the strip of coastal lowland in the latter region varying between 10 and 100 miles in width and sloping gently to the base of the mountains. The greatest elevations in Mexico are found among the central cross-ridges that divide the great plateau, the loftiest of these being in the Cordillera de Anahuac, which stretches between the parallels of 18° and 20°, from the western to the eastern Sierra Madre, and incloses the valleys of Mexico and Puebla. The central ridge is of recent igneous origin, as is evidenced by present volcanic activity. Severe earthquake shocks have caused much loss of life in Mexico. The highest peak in the Cordillera de Anahuac, as in all Mexico, is Orizaba (Citlaltepetl), on the western border of Vera Cruz, with an altitude of 18,314 feet. Another dormant cone in the State of Mexico is Popocatepetl ("Smoking Mountain"), 17,550 feet above sea-level, while nearer the City of Mexico is the extinct volcano of Ixtaccihuatl (16,960 feet).

Rivers and Lakes. Owing to its extremely mountainous character Mexico has very few permanent rivers. Even the Rio Grande, the largest stream, at times becomes almost dry between El Paso and Ojinaga (Presidio del Norte) in consequence of the diversion of water for irrigation in New Mexico. The Rio Grande is navigable, for small boats only, for about 450 miles. The most important stream of the north is the Conchos, an affluent of the Rio Grande, which flows through the State of Chihuahua. In Southern Mexico two considerable rivers flow into the Pacific—the Grande de Santiago or Lerma, principally in the State of Jalisco, and the Rio de las Balsas, navigable for a short distance in its course through and along the northern borders of the State of Guerrero. The Grijalva and Usumacinta rivers with their tributaries afford the only navigable waterways worthy of note in the Isthmus of Tehuantepec.

The principal lake region of Mexico is within the States of Michoacan and Jalisco. Lake Chapala, on the border line, eighty miles long and thirty miles wide, is by far the largest inland body of water. In the Valley of Mexico is a group of lakes which has a history unique in the annals of hydraulic engineering. The valley is an

THE CASTLE OF CHAPULTEPEC, MEXICO

The Castle of Chapultepec, now the Mexican presidential residence, crowns a steep cliff two miles south of the city proper, with which it is connected by a boulevard, the famous Paseo. Great trees, chiefly cypresses, surround the modern structure, as they did the ancient palace of the Aztec Montezuma. The home of the national executive is palatial in extent and beauty. Terraces paved with marble surround the edifice, and from them the view over the valley is one of the most magnificent in the world. Within the building are great halls, staircases, and galleries expensively decorated. The heights where the castle stands were the scene of a victory by United States troops in 1847.

immense basin largely occupied by these shallow bodies of water. Not only were destructive inundations frequent, but the miasmatic exhalations from the stagnant lakes made Mexico the most unhealthful city in the world. Under the Spanish viceroys large sums were expended and hundreds of thousands of lives were sacrificed in the fruitless endeavor to drain the valley, but under the government of President Diaz the drainage plan of the Spaniards, with certain modifications, has been realized, the system having cost more than $20,000,000 complete. A canal nearly thirty miles long controls the waters of the lakes, and with them flushes the sewers of the city, while a drainage tunnel 6.2 miles long and from 13.7 to 14.06 feet in cross-section has been bored through the mountains north of Lake Zumpango. This work ranks among the greatest achievements of modern times.

Climate, Flora, and Fauna. Although Mexico is about equally divided geographically between the temperate and the torrid zones, on account of the great range in elevation of the land surface it has three distinct

FIELD OF MAGUEY

The maguey, or agave, indigenous to Mexico, is extensively cultivated upon the great central plateau. The juice which the plant secretes during the eight years before it arrives at maturity is drawn off by means of a primitive siphon into a goat skin to be fermented into a drink called pulque.

zones of climate and vegetation, namely: the hot zone or *tierra caliente*, between sea-level and an elevation of about 3,000 feet; the temperate zone or *tierra templada*, between 3,000 and 6,000 feet; and the cold zone or *tierra fria*, above 6,000 feet. In the coldest part of the cold region at the north the extreme is about 20°, and in the hottest part of the hot zone at the south the highest temperature is about 110°. The great plateau is peculiarly favored in respect to climate, the temperature of the lands in about the latitude of the City of Mexico ranging between 65° and 75° the year round. Except where local conditions of drainage intervene, endemic fevers disappear above an altitude of 2,800 feet. The seasonal changes and degrees of humidity are subject to as wide variation as the absolute temperature. In general the parallel of 28° N. is the dividing line between the region of four seasons to the north and the zone of a wet and a dry season to the south.

Distinct zones of vegetation mark the climatic divisions of Mexico, the flora ranging from the tropical to the high temperate. The luxuriant vegetation of the tropical jungles includes palms, rubber-trees, ebony, rosewood, mahogany, mangroves, acacias of various species, and other shrubs. Of fruits, the orange, pomegranate, cocoanut, banana, pineapple, mango, lemon, lime, alligator-pear, papaw, sapote, and anona grow luxuriantly. Sugar-cane, maguey, coffee, cacao, yucca, cotton, vanilla, and sisal hemp or henequen are important plants under cultivation. In the temperate regions ordinary types of oaks, pines, spruces, and firs are the leading varieties of trees, and field crops that flourish in the United States may be raised. Indian corn, wheat, oats, and barley are easily cultivated.

The fauna of Mexico is a combination of the faunas of North and South America. Among the larger quadrupeds are the jaguar, ocelot, puma, coyote, tapir, ant-eater, armadillo, and peccary; several varieties of monkeys inhabit the southern jungles; numerous species of snakes, some of which are venomous, exist; alligators are found in the bays and estuaries and in a few of the lowland streams; while in the axolotl, which resembles a gigantic tadpole with four legs, Mexico has a distinctive indigenous amphibian. Birds of all climates find appropriate conditions in some part of Mexico. Among insects, the foraging ants and nest-building termites are worthy of mention.

Agriculture and Mining. These are the foremost industries, but both are susceptible of still greater development. In many districts the methods of farming practiced are of the most primitive description, and the returns from the soil are in no way comparable to what might be realized by the introduction of scientific irrigation and other improved methods of tillage.

Mexico undoubtedly is destined to figure largely in the world's production of rubber and coffee, but the development of these industries, notably the culture of the rubber-tree, requires the investment of large capital without returns for a number of years. Many sections of Mexico are favorable to the culture of sugar cane, cotton, and tobacco, the last named being of a quality that rivals the product of the Vuelta Abajo district of Cuba. A large part of the State of Yucatan is too sterile for the production of any crop except that of henequen, but this industry alone has been a great source of prosperity to the peninsula. The State of Chiapas produces cacao of remarkably good quality, while that of Tabasco is fairly good, but the supply is not sufficient for home consumption. The vanilla-plant is indigenous to the Isthmus of Tehuantepec, but the scarcity of labor and the prevalence of fevers have retarded the development of the industry. Rice grows well without inundation, and the cultivation of this cereal, together with that of ginger and peppermint for medicinal, and canaigre for tanning purposes, may be extended with profit. The yucca or starch plant is the potato of the Mexican peon, and a source of wealth not to be despised. The working of the forests for chicle-gum is a growing industry. Fattening grasses of rank growth are easily cultivated in the low-

TYPICAL MEXICAN HOME

The situation of the Mexican peon, so lately emancipated from practical serfdom, is somewhat similar to that of the negro in our country. Poverty is prevalent, but with the financial awakening of the country conditions are improving. The thatched hut, with its limited space for housing a family, is a frequent object along the rural roads of Mexico.

lands, and alfalfa grows everywhere so luxuriantly that it is little esteemed. These advantages and the certainty that water for stock can be provided by boring wells, even on the arid plains, give promise of a prosperous future for cattle-raising in Mexico.

THE CATHEDRAL, CITY OF MEXICO

The Holy Metropolitan Church of Mexico, consecrated in 1667, occupies the site of the Aztec temple destroyed in the Spanish Conquest. Beneath the clock tower are the arms of the Republic, significant of secular control over religion.

Mexico, in proportion to its area, is the richest mining country in the world. Among the metalliferous rocks that extend over a territory 800 miles long, from Sonora to Oajaca, are found gold, silver, platinum, copper, lead, iron, mercury as the sulphide cinnabar, tin, cobalt, bismuth, zinc, salt, sulphur, antimony, obsidian, onyx, marble, alabaster, gypsum, asphaltum, and petroleum, besides opals and other precious stones. Perfectly carbonized coal has been located, only recently, in the States of Coahuila and Sonora, and lignite veins on an extensive scale have been discovered in the Lake Chapala district and in the State of Michoacan. The discovery of these deposits, owing to its bearing on the future industrial development of Mexico, is one of vast commercial importance. Silver, with a relatively small amount of gold, is found principally in Sonora, Chihuahua, Zacatecas, San Luis Potosi, Guanajuato, and Hidalgo. Mexico produces one-third of the world's annual output of the white metal. The most promising gold-fields are on the western slope of the Sierra Madre.

People, Religion, and Education. The Mexican nation is composed of two racial stocks. Nearly one-half of the people are of mixed Indian and Spanish blood, about one-third are of pure Indian descent, and the remainder are of European ancestry, descendants of Spanish colonists who migrated under Spanish rule. The Mexicans of pure Indian blood range in the social scale from the city Indians, who have acquired the ways and ideas of Spanish-American civilization, to the uncivilized wild tribes of the unsettled wilderness in the extreme southern and northern States. The Indians of the cities and farming regions are a sober and hard-working people, capable of much physical endurance, but as a rule unambitious and unprogressive. Some, however, have become distinguished men. President Juarez was a pure-blooded Indian. The Mexicans of pure Spanish blood are also conservative in ideas, but they maintain the European modes of life of their ancestors and preserve Spanish culture. They are the real leaders of Mexican social life and dominate in political effort.

PYRAMID OF CHOLULA

At the time of the Spanish Conquest Cholula was a great Indian city, built about the sacred mound on which then stood the temple of Quetzalcoatl. But the mound, of sun-dried brick, dates back to prehistoric antiquity. On its summit now stands the pretty modern church of Nuestra Senora de los Remedios.

OLD ARCH BRIDGE ON THE ROAD TO CHOLULA

The road from Puebla to Cholula is very picturesque, winding through fields of grain and maguey, and past stately haciendas. Mule cars are the old-fashioned means of conveyance, and upon these the traveler may go sightseeing, passing under great arches of masonry bearing the Spanish arms.

The population of mixed blood combines much of the genius of Spanish ancestry with the vitality of Indian blood. Under the stimulus of education and political experience this element is showing an ability in practical affairs that seems to guarantee a strong national development for the Republic.

The prevailing religion of Mexico is Roman Catholic. The clergy formerly possessed great political influence, but since 1859 it has largely lost it through the confiscation of church property by the Government and the enactment of repressive laws. Marriage has been made a civil ceremony, convents have been suppressed, and religious instruction barred out of the public schools. Protestantism has secured a foothold among the Mexicans, but exists feebly.

Education is in a backward state. Public schools exist under the control of the federal government, and since 1896 primary education has been compulsory in the districts

directly under federal control. In nearly every State the law provides for free schools and compulsory attendance, but there is no strict enforcement of the law. At the national capital there are excellent schools of law, medicine, and engineering. School statistics show more than 10,000 public schools in the country and about 2,600 private schools. The Indian population, however, is practically illiterate.

Industry and Commerce. The unsettled political conditions of Mexico from 1821 to 1877, and the lack of transportation facilities, prevented development of the country's rich resources. At the accession of President Diaz to power in 1877 Mexico had but one railroad. Since that year the building of railroads has been the greatest feature of Mexican development, and the federal government has aided the work by large subsidies. Nearly all the larger cities now are connected with each other by rail. Rich mining regions and agricultural districts have secured outlets for their wealth, and trade has been developing rapidly. Outside capital has done this for Mexico. Railroad building and mining have been mainly in the hands of American and English investors, while retail trade of the cities has been largely absorbed by German merchants.

PLAZA AND PALACE, GUADALAJARA

Guadalajara is no less famed for its beautiful houses and flower-adorned parks than for its pottery, the fragile Guadalajara ware. The Palace fronting the Plaza, where the band plays every night, as in all Spanish cities, is a fine modern building. On the warm evenings of summer the Plaza is filled with a throng assembled to chat and rest while the music lasts.

CATHEDRAL, GUADALAJARA

The Cathedral, completed in 1618, replaced a straw-thatched church which had cost but $20. In one of the towers is a little bell, called the Campaneta del Correo, which rings only to announce events for public rejoicing. The high altar, of marble and bronze, shows beautiful life-size statues of the four Evangelists. Formerly there was an altar of silver.

Notwithstanding high tariffs and favorable monetary conditions, Mexico manufactures comparatively few commodities for export. Small enterprises fabricating goods for home consumption, however, are widespread, and in their homes or in the factories the Mexicans make practically all they require in the way of cotton and woolen fabrics, blankets and shawls, leather goods, pottery, and hats. The total of Mexican exports of all kinds has greatly increased in recent years, about three-quarters of the exported material going to the United States. The chief exports are coffee, hides, bullion, henequen, mahogany, and coal.

Chief Cities. The City of Mexico, founded in 1325 as Tenochtitlan, the capital city of the Aztecs, has been the capital successively of the Spanish governors and viceroys and of most of the various independent governments. It is situated near the center of the Valley of Mexico, 7,434 feet above sea-level. The city is laid out in the form of a square, with the railways of the national system, of which it is the center, entering from all sides. It is the richest commercial center in the country, and its manufacturing industries are extensive, among the more important industrial works being distilleries, breweries, foundries, paper-mills, textile factories, tobacco factories, wagon shops, and match factories. On the site of the Teocalli or Aztec temple stands the oldest building in the capital, the Cathedral, a Renaissance structure with interior of Doric style, which was begun in 1573 and completed in 1667 at a cost of about $2,000,000. The National Palace, which occupies the site of the palace of Cortes, dates from 1692. There is a national library containing 200,000 volumes, a national museum, a picture gallery, and many ecclesiastical and educational institutions.

CHAPEL OF THE WELL, GUADALOUPE

Where the Virgin of Guadaloupe appeared to Juan Diego, a miraculous spring gushed forth. A chapel, called La Capilla del Pocito, now covers it.

THE STONE SAILS, GUADALOUPE

It is said that certain sailors, escaping shipwreck, brought mast and sails as an offering to Our Lady of Guadaloupe. Later a stone covering was erected.

Toluca, capital of the State of Mexico and its principal commercial town, is situated forty-five miles from the City of Mexico and 8,600 feet above sea-level. The State is one of the most important agricultural and industrial sections in Mexico. The climate varies with the altitude. Stock-raising is an important source of wealth, and valuable mineral deposits are worked.

Puebla, capital of the State of the same name, lies southeast of the City of Mexico and at practically the same elevation. The great volcanic cones of Popocatepetl and Ixtaccihuatl lie to the west in full view of the city. Puebla has extensive manufactures of cotton cloth, pottery, and glassware, and important agricultural interests.

Guanajuato is the capital of the State of the same name, a region rich in minerals and one of the most important mercantile and industrial centers of Mexico. The total trade of the State has an estimated annual value of about $67,000,000. The capital city was the scene of the execution of a number of patriots during the war for independence in 1811.

San Luis Potosi, capital of the State of the same name, is situated in a broad, fertile valley, rich in silver. The productive Potosi mines became known to Europeans in the 16th century. The capital, founded in 1576, is an important railway center with thriving manufactures of shoes, hats, and hardware. Trade is large and increasing.

Monterey, capital of the State of Nuevo Leon, has many manufacturing establishments and is the commercial center of Northern Mexico; the city is located in a great plain, flanked by the Sierra Madre and Sierra de Picachos mountains.

Saltillo, capital of the State of Coahuila, is noted for the manufacture of serapes, cotton cloth, knit goods, and flour. Owing to its mild and genial climate the city is a favorite summer resort.

Durango, capital of the State of the same name, is a prosperous town with modern municipal improvements and flourishing sugar, flour, and woolen mills and foundries. It is also a banking center.

A WANDERING MINSTREL

Little companies of strolling Indian minstrels are often to be seen, playing for the most part on native instruments their strange minor melodies, learned at far-off camp-fires.

Vera Cruz, the commercial capital of the State of Vera Cruz, has an annual trade amounting to about $100,000,000.

Guadalajara, capital of the State of Jalisco, is a beautiful city situated 6,100 feet above sea-level. The agricultural, manufacturing, and commercial interests of the State are of considerable importance.

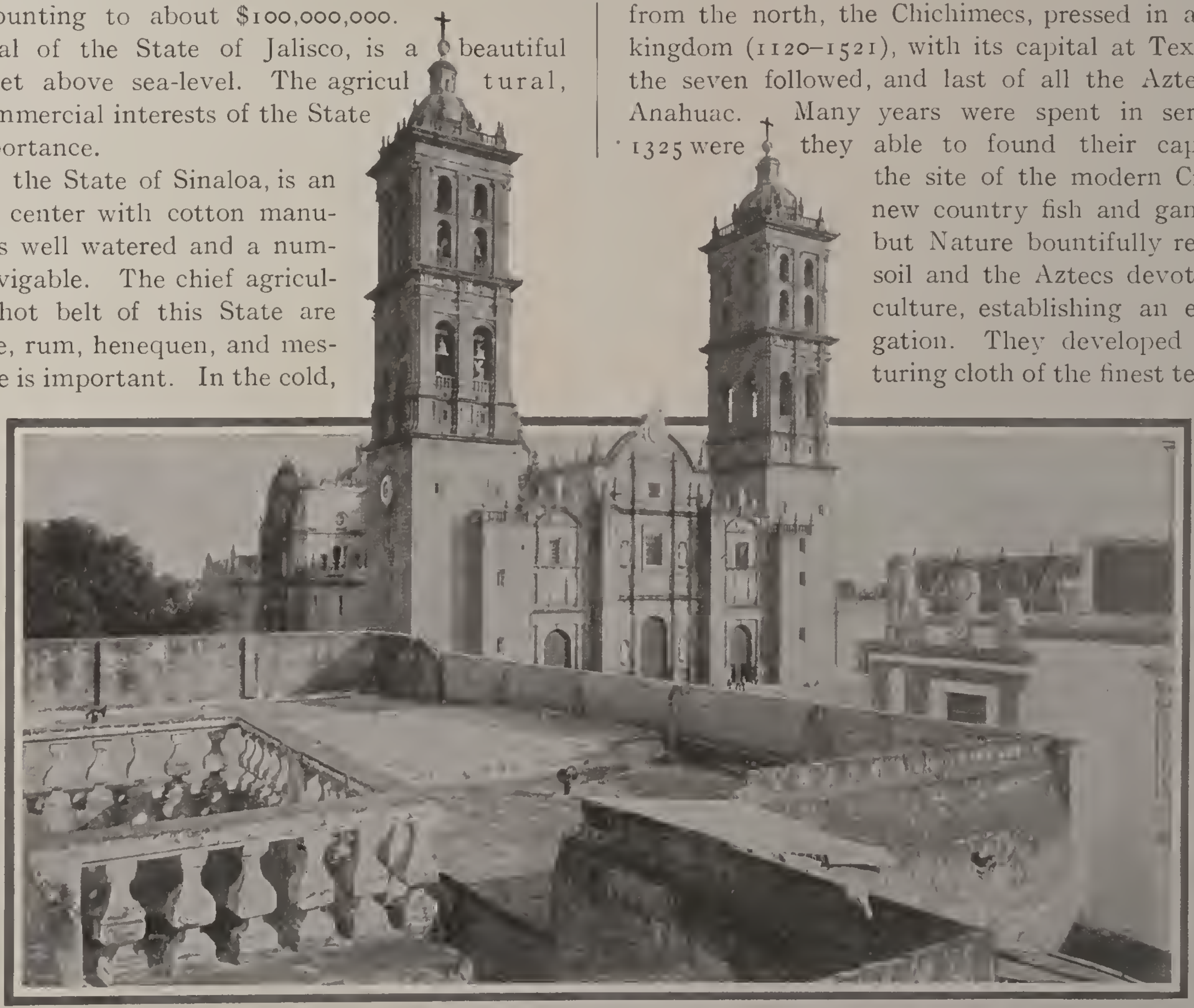
Culiacan, capital of the State of Sinaloa, is an important commercial center with cotton manufactories. The State is well watered and a number of its rivers are navigable. The chief agricultural products of the hot belt of this State are corn, wheat, sugar-cane, rum, henequen, and mescal; the raising of cattle is important. In the cold, wet mountain region are mines of wonderful richness.

Government. By the Mexican constitution of 1857 the governmental system was modeled upon that of the United States. The president is chosen for a four-year term and may be reelected. He has as a body of advisers a cabinet of seven members. There is no vice-president, but if the president becomes unable to act the congress may elect a temporary executive to take his duties. Legislative power is vested in a congress of two chambers, the members of both being elected by adult male suffrage. Senators serve four years. During the recess between congressional sessions the "Permanent Committee" of twenty-nine members watches over matters that are under congressional control. There is a federal judiciary with a series of appellate courts, whose powers are similar to those of the United States judiciary. Each one of the twenty-seven States of the federation has its own government and legislates on all matters not vested by the constitution in congress. There is a federal district surrounding the national capital and two territories which are too sparsely settled to have the regular system of self-government.

History. Mexico, unlike the northern portions of North America, had an ancient civilization prior to the European conquest.

The Toltecs were the first, the Aztecs the last, of seven cognate tribes, all speaking the same Nahuatl or Mexican language, to invade Mexico from the north. The first band of immigrants, whose original home is a matter of pure conjecture, during the 7th century founded a city which they called "Tollan" or Tula, fifty miles north of the site of the City of Mexico. After 449 years' supremacy on the plateau of Anahuac the Toltecs were dispersed and another tribe from the north, the Chichimecs, pressed in after them, founding a kingdom (1120–1521), with its capital at Texcoco. Other tribes of the seven followed, and last of all the Aztecs in 1243 settled in Anahuac. Many years were spent in servitude, and not until 1325 were they able to found their capital, Tenochtitlan, on the site of the modern City of Mexico. In the new country fish and game were not abundant, but Nature bountifully repaid the tilling of the soil and the Aztecs devoted themselves to agriculture, establishing an efficient system of irrigation. They developed textile arts, manufacturing cloth of the finest texture. From the stone and metal of the mountains they made various implements and became skilled in carpentry, masonry, engineering, and even the cutting and polishing of gems. They had some knowledge of astronomy, and their calendar divided the year into eighteen months of twenty days each, with five days intercalated.

The Aztecs were conquerors and in the two centuries they held sway in



CATHEDRAL, PUEBLA

The building of the first cathedral in Puebla began in 1536, and the present imposing edifice of dark stone occupies the original site on the Plaza Mayor. In the old north tower are eighteen bells, the largest weighing nine tons. The south tower is a later addition.

Anahuac they brought the greater part of Mexico into alliance or subjection. In their wars a religious as well as a political motive animated them, for human sacrifice was part of their religion and was universally practiced.

FALLS OF EL SANTO DEL ABRA

In the Tamasopa Cañon, of which the Cascades of El Santo del Abra, over a mile in length, form the most beautiful part, is to be found the finest scenery in Mexico. It is in the State of San Luis Potosi, along the railroad from the mountains to Tampico.

Such was the civilization which Hernando Cortes found on the shores of Lake Texcoco. After its subjection the country, under the name of New Spain, was ruled for 300 years by governors, royal commissioners, and viceroys sent from the Peninsula. Spain was seeking silver and gold in the New World, and the first care of the rulers was to exploit the country's mineral wealth, regardless of the welfare of the people. Between 1798 and 1810 rebellion after rebellion occurred. In the latter year, under the leadership of the parish priest of Dolores, Don Miguel Hidalgo y Costilla, a rebellion began, which, although often suppressed, was not brought to an end until 1821, when Gen. Agustin de Iturbide, in command of the Royalist forces, made peace with the patriot Guerrero on terms that sounded the knell of Spanish dominion in Mexico. The Spanish viceroy, Juan O'Donojú, assented to the Treaty of Córdoba. Iturbide marched into the capital and the following year was elected and crowned Emperor. In May, 1823, he abdicated and a republic was established. For nearly thirty years revolutions prevailed. During this period Texas, having been settled by immigrants from across the Rio Grande, declared its independence of Mexico. War with the United States followed, and as a result Mexico lost more than two-fifths of its territory. During the Civil War in the United States French troops took possession of the Mexican capital, and in 1864 proclaimed the Archduke Maximilian of Austria, Emperor of Mexico. Maximilian ruled a portion of the country until 1867, when he lost the protection of the French through the demand of the United States that foreign troops be gradually withdrawn. On the withdrawal of troops all Mexico, except four cities, abandoned the Emperor. He was besieged at Queretaro where he was made a prisoner and shot, the Mexican republicans feeling confident that by treating the case thus sternly they would at the same time prevent the danger of future intrigue by the deposed Emperor, and serve warning on Europe that the republic must be left to work out its destiny without interference.

THE GROTTO, FROM THE BRIDGE OF GOD

At Cafetal, three hundred steps downward from the railroad station, is one of the scenic gems of the Tamasopa region. A rocky bridge extends across a mountain stream and between two falls. Round about hang masses of stalactites, mingled with the growth of tropical foliage.

MARKET PLACE, TAMPICO

Tampico, which has the best harbor in Mexico, is built upon low, marshy ground, near the Gulf. Its commercial importance is developing under the stimulus of capital invested in the region by citizens of the United States, and the city will probably supersede Vera Cruz as the chief port of Eastern Mexico. The district lying around it is especially favorable for grazing and sugar growing. Market days attract a busy crowd to the open square of the city.

Throughout the struggles of the period from 1857 to 1867 the constitutional President of Mexico was Benito Juarez, an Indian of remarkable patriotism and force of intellect, who, on the downfall of Maximilian, reëntered the capital and retained authority until his death in 1872. In 1877 Gen. Porfirio Diaz, who has in his veins some Mixtec Indian blood, came into power. He was followed in the presidential office by Gen. Manuel Gonzalez, but in 1884 General Diaz was elected to serve a second term and has been repeatedly reëlected.

WEST INDIES

THE WEST INDIES is a geographical term applied to the insular region that extends from the neighborhood of the Florida coast to the northern shores of South America, bordered by the Caribbean Sea, the Gulf of Mexico, and the Haitien Sea. These islands are also called the Antilles. Cuba and Haiti, the two larger of the islands, are occupied by independent republics. Porto Rico, fourth in size, is a Territory of the United States. The remainder of the islands are colonial dependencies of Great Britain, France, the Netherlands, and Denmark. With the West Indies it is customary to group the outlying Bermuda group for convenience of treatment.

VIEW IN THE GARDEN OF A TOURIST HOTEL AT NASSAU, BAHAMAS

Between the northerly islands of the West India chain and those lying more southerly there are some decided differences. The flora of the Bahama group is similar in its species to that of lower Florida, and is distinctively tropical. To the luxuriance and vigor of the vegetation the islands owe much of their charm. At many points, more especially in the gardens, where special effort has been made to create an effective arrangement, there are scenes of great beauty. Nassau, the gateway of tourist travel, where the larger hotels are located, is especially notable in this way.

Physiography. The insular region of the West Indies is a gigantic submerged mountain chain, whose height has been built up at many points by the deposits of the coral polyp. The highest point of the system is Loma Tina in Haiti, which reaches 10,300 feet above sea level. The Sierra de Cibao is the main ridge of Haiti, but other ranges lie to the north and south of it. The interiors of Cuba and of Porto Rico are marked by mountains. In Jamaica are the Blue Mountains. The chain of small islands that curves east and south from Porto Rico bears several volcanic peaks, among which Mount Pelée in Martinique and La Soufrière in St. Vincent have had violent eruptions within recent years. Morne de Diablotin (5,315 feet), in Dominica, is the summit of the Caribbee chain.

The rivers of the West Indies are short and usually unnavigable except for canoes. Outside of Cuba and Porto Rico the more notable are the Artibonite, Yaqui, and Yaqui del Norte in Haiti, and the Minho, Hector, and Black in Jamaica. Many of the rivers are rapid and have sufficient fall to furnish good water-power.

Climate, Flora, and Fauna. The climate of the West Indies is purely tropical. The average temperature from May to September is above 80°, while in the season of the strongest northeast trades, from October to March, the temperature rarely falls below 75°. From August to October the West Indies are visited by cyclonic storms, the famous West India hurricanes that frequently prove so violent as to be destructive to life and property.

The West India islands present a bewildering variety of tropical flora, but its distribution is by no means uniform. Bananas, pineapples, the cassava, the sweet potato, cotton, tobacco, and Indian corn are indigenous. There are no large mammals on the islands. Among reptiles there are the iguana, the alligator, the cayman or crocodile, and a considerable number of serpents. Each of the Caribbee Islands has its special fauna, including many brilliant-plumaged birds, while the Greater Antilles abound in winged creatures that are both migratory and indigenous.

Historical. Columbus discovered the Bahamas, Haiti, and Cuba on his first voyage, and the whole West Indies passed with the neighboring mainlands under the sovereignty of Spain. During the latter part of the 16th century the Dutch, French, and English carried on much illicit trade in the islands, and in 1625 France and England bade defiance to Spain by openly colonizing St. Christopher and Barbados. In 1634 the Dutch seized Curaçao. About this time arose the famous pirates called buccaneers, who harassed Spanish commerce and aided

THE OLD CATHEDRAL AT SANTO DOMINGO Copyright, Detroit Photo. Co.

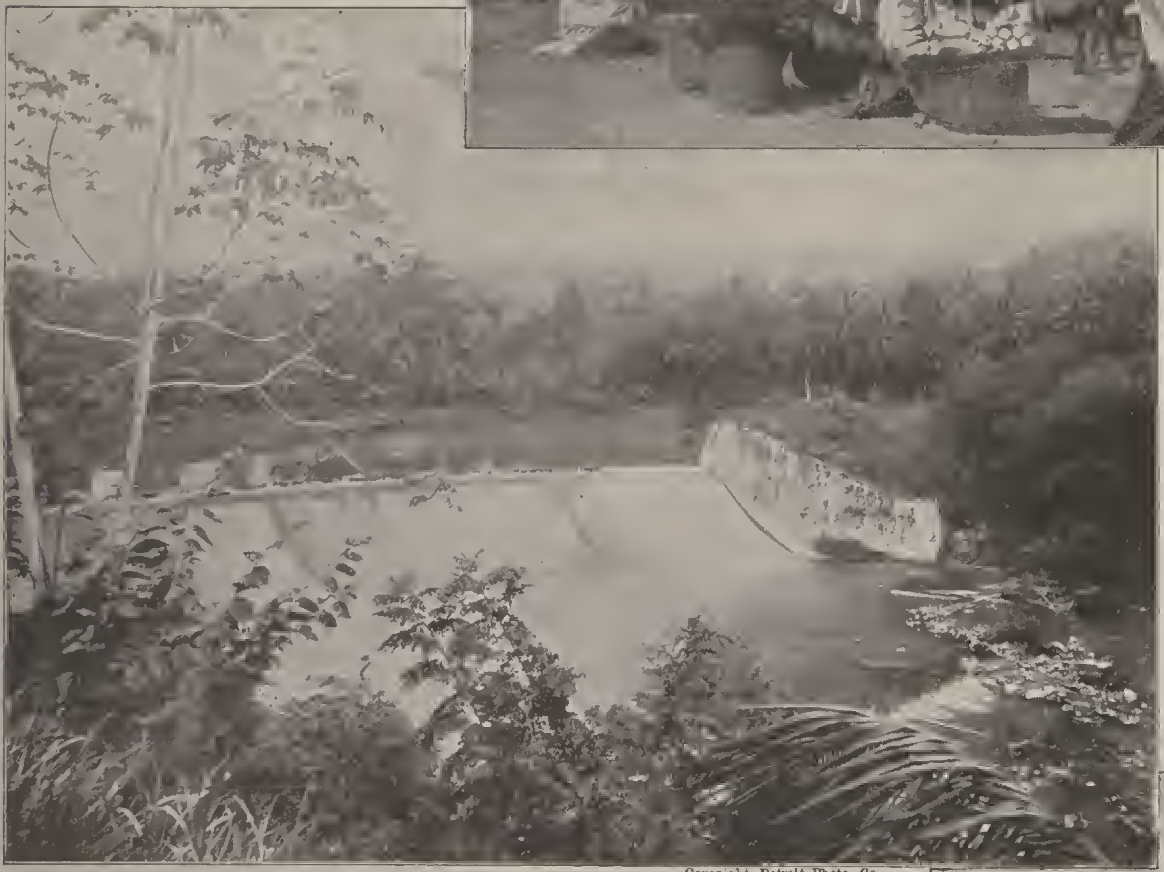
The ancient cathedral of the Dominican capital is one of the great historical monuments of the two Americas. It was completed in 1540 during the period of Spanish conquest, when the city was the metropolis of the possessions of Spain. Its time-stained walls, facing the central plaza of the city, are eloquent reminders of the past. Within the crypt the bones of Columbus himself were long contained, and locally it is asserted that they still repose there.

in restricting Spanish power. Jamaica became British in 1655 and Haiti partly passed under French rule in 1697. Denmark entered the West Indies by the purchase of St. John from Spain in 1717. Spain gave up Haiti to France in 1795, but the revolt of 1801 lost the island to the French and created the negro republic of Haiti which, after years of dissension, split into the present division in 1844. Spanish power in the West Indies was finally wiped out in 1899 by cession of Porto Rico and withdrawal from Cuba, the latter island becoming a republic in 1902 under the auspices of the United States.

HAITI

The Republic of Haiti, occupying the western end of the island of Haiti, has an area estimated at 10,204 square miles. The language of the country is French, spoken in its purity by the educated, but as a debased patois by the masses.

General Conditions. Agriculture is the principal industry, and the raising of coffee, cacao, cotton, sugar, and tobacco are its leading branches. Despite the indolence of the inhabitants, which is a bar to agricultural progress, and the suspicion with which they regard the interest of white foreigners in the mineral resources, the exports of Haiti are far greater than the imports. The principal articles of export are coffee, cacao, cotton, hides, and logwood. The forests would be richly productive commercially with better transportation, and rich mineral deposits exist, although their extent is uncertain.



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VIEW ON THE RIO COBRE, JAMAICA

The Rio Cobre is an outlet of one of the interior basins of Jamaica. For some distance it passes underground, emerging again and finally reaching the sea. At one point of its course the waters of the stream have been utilized for irrigation purposes by the building of a dam which diverts a part of its volume.

The principal cities of the republic are on the coast. Cap Haitien the capital of the colony under the French, is situated on a commodious harbor on the northern coast. Gonaïves, on the southern side of St. Nicolas Peninsula, is a thriving commercial town. Port au Prince, the capital, is situated on a good harbor. Petit Goâve, on an excellent harbor, has for its chief industry the hulling and preparing of coffee. Jérémie is noted for its export of cacao. The most populous city of the interior is Mirebalais.

Executive power is vested in a President, elected by the legislative chambers for a term of seven years. Legislative authority is vested in a Senate, whose members are elected by the lower house, and a Chamber of Deputies, whose members are elected by the people. Education is free.

THE HYPPOLITE ARCH

An enormous wooden arch, over the entrance to the chief market place at Port au Prince, in Haiti, perpetuates the memory of President Hyppolite.

SANTO DOMINGO

The Republic of Santo Domingo, more properly called the Dominican Republic, has an area of 18,045 square miles. In this division of the island negroes are in the minority, most of the inhabitants being mulatto descendants of the original Spanish settlers, their slaves, and the aborigines. There are few Europeans. The popular language is Spanish.

Resources and Government. Sugar-growing is the principal occupation of the people, the sugar lands of Santo Domingo being among the most fertile in the West Indies. Excellent tobacco is grown, and the production of bananas, coffee, and cacao is increasing. Cattle raising and dairying are quite important. Among the most striking features of the island are the luxuriant forests, abounding in choice cabinet woods and timber suitable for ship and house building. Deposits of iron, coal, copper, gold, and salt exist, but there is no mining industry. The city of Santo Domingo is the capital. The one important inland city of the republic is Santiago de los Caballeros, in the heart of the richest agricultural section of the island. Puerto Plata is the principal northern seaport.

The President of Santo Domingo is chosen for a term of four years. The legislative powers are vested in a National Congress of twenty-four deputies, chosen by popular vote. Elementary instruction is free and compulsory. Under an arrangement made with the United States Government in 1905 the collection of the customs revenue of the republic is administered by appointees of the United States.

THE BEACH AT LA BREA, TRINIDAD

Trinidad, lying near the South American coast, was visited and named by Columbus during one of his later voyages. It is now a flourishing British colony, with valuable mineral resources. Among the smaller settlements upon its coast is La Brea, commercially important because of the fact that its wharves are used as a shipping point for immense quantities of asphalt taken from the famous asphalt lakes.

DEPENDENCIES

The British West Indies are divided, for administrative purposes, into six separate groups, as follows: Bahamas, Barbados, Jamaica, Leeward Islands, Windward Islands, and Trinidad, with Tobago. Each group is under a Governor appointed by the Crown, who is usually assisted by an Executive or a Privy Council and a Legislative Council. The French West Indies embrace the two colonics of Martinique and Guadeloupe. The Dutch and Danish islands each form an administrative unity.

Bahamas. The Bahama group includes more than 690 islands and islets, with an aggregate area of 5,450 square miles. New Providence, Andros, and Eleuthera are the most important of the group. Nassau, the capital and chief city, a favorite winter resort for Americans, is on the island of New Providence. Sponges, pearls, shells, and ambergris are important products of the waters of the Bahama banks, most of the inhabitants of the islands depending upon the products of the sea for their living. Fruit and vegetables, chiefly pineapples, oranges, and tomatoes, are grown for export to the United States, and sisal culture is extending.

THE HARBOR OF KINGSTOWN, ST. VINCENT

The island of St. Vincent is one of the volcanic Caribbees. Kingstown, the capital and commercial center, lies on a broad bay of the southwest side, with steep mountains rising around it in an amphitheater. One of the most attractive panoramas in the West Indies is revealed by a view overlooking the city, which stretches around the great curve of the bay, its red-roofed houses partly masked by groves of palms.

Jamaica. Jamaica, the largest of the British West Indies, with an area of 4,200 square miles, lies about ninety miles due south of the coast of Cuba. Copper, iron, and lead are found in Jamaica, but not in commercial quantities. Agriculture is the principal occupation. The leading products are pimento, which produces the allspice of commerce, sugar-cane, cacao, coffee, and bananas. Cocoanuts are largely raised; fruit growing, especially that of oranges and bananas, is on the increase. Much ginger is grown also. The manufacture of rum is important.

NATURAL ARCHES, BERMUDA

Underground caves and curious rock formations exist in the Bermuda group. Near Tuckerstown are abrupt cliffs and enormous arches that have been worn from solid rock by the action of the sea, and have since been raised above the reach of the waves by elevation of the land.

The capital and principal city of Jamaica is Kingston, near which is the naval station of Port Royal, British headquarters in the West Indies. Port Antonio, on the northeastern coast, is the center of the fruit trade. Spanish Town is the second city of the colony. Montego Bay is third in size.

Minor British Islands. Of the smaller British islands, that of Trinidad, 1,754 square miles in area, is the largest. It lies close to the South American continent, and, with its neighbor, Tobago, is really a part of it. The next larger islands are Dominica, 291 square miles; St. Lucia, 233 square miles; Barbados, 166 square miles; Grenada, 133 square miles; St. Vincent, 132 square miles, and Antigua, 108 square miles.

Commercially the importance of these islands has waned with the decadence of sugar production, but politically they are still of considerable value as naval bases for Great Britain. Sugar-cane retains place as one of the principal crops of the islands, but is slowly yielding its position to coffee and cacao, while tobacco and cotton culture are also advancing in importance. Other plant products are pineapples, cocoa-nuts, limes, arrowroot, and spices. Asphalt is found in Trinidad and Barbados; salt is produced in Anguilla; and phosphate of lime is shipped from the Virgin Islands.

Port of Spain, on a shallow harbor of Trinidad, is one of the leading seaports of the West Indies. Bridgetown, in Barbados, is a port of call for steamship lines. Basseterre, in St. Christopher, is the commercial and political center of the island. St. John, in Antigua, is the capital of the Leeward Islands and a port of some consequence. Castries, in St. Lucia, has a deepwater harbor and is a naval coaling station. Kingstown, in St. Vincent, is a commercial town. St. George, in Grenada, is the Windward Islands capital.

Bermuda. Bermuda, an isolated archipelago in the Atlantic, comprises about 360 small islands, only twenty of

TRAFALGAR SQUARE, BRIDGETOWN, BARBADOS

In the early part of the 19th century Barbados was one of the chief points of British trade in the West Indies. The famous battle of Trafalgar, which secured to the British the safety of their ocean commerce, was, therefore, of commanding importance to the little American islet. Trafalgar Square, which lies near the wharves of the city's water front, and in one part of which stands a statue of Lord Nelson, perpetuates the memory of the victory.

which are inhabited, lying about 580 miles off the coast of North Carolina and 677 miles from New York. The total area of the islands is about twenty square miles. The mean annual temperature is 70°. By reason of its salubrity and its nearness to New York, Bermuda is a favorite winter resort for Americans. Bermuda imports nearly all food supplies from the United States and Canada, and the greater part of the produce exported is taken by those countries. Agriculture is the chief industry of the group.

St. George, on the island of the same name, and Hamilton, the capital, on the main island, are the principal towns. The value of the islands as a naval and strategic possession can hardly be overrated. The landlocked harbor of St. George has one of the most commodious naval stations of Great Britain.

THE HARBOR FRONT, WILLEMSTAD, CURAÇAO

The little Dutch dependency of Curaçao possesses in St. Anna Bay one of the best deep-water harbors in the Caribbean Sea. Fronting its expanse are neat warehouses and wharves, at which a busy trade is carried on by Dutch merchants. The city that lies back of the docks is, like the cities of the Netherlands, the mother country, crossed by canals, and is built in the Dutch style of architecture.

French West Indies. The French Antilles comprise the two colonies of Martinique and Guadeloupe, each administered as a separate colony under a Governor and an elected General Council. The area

TERRACED STREETS, DANISH ISLANDS

Charlotte Amalie, the capital of the Danish West Indies, is very generally called St. Thomas. The city lies on a narrow shelf between the harbor and a mass of steep hills, and the residence portion reaches the lower slopes of the hillsides. Here are pretty, terraced streets, with pleasant houses surrounded by orange trees and palms.

of Guadeloupe Island is 583 square miles of the colony, 688 sqaure miles Martinique has an area of 381 square miles. The French colonists have the same institutions and rights as are possessed by the people of France.

Guadeloupe is partly a volcanic, rugged, and forested area, and partly a plain largely given over to the culture of sugar-cane. The chief seaport of Guadeloupe is La Pointe-à-Pitre. Basse Terre, on the southwest coast, is the political capital. The chief productions of Guadeloupe, sugar and rum, have been hurt by competition, resulting in increasing the cultivation of cacao, coffee, tobacco, and fruits for export.

Martinique, like parts of Guadeloupe, is rugged and mountainous. Owing to the climate, the rich soil, and the abundant humidity the island is clothed with a luxuriant forest. The same factors make it a most fruitful agricultural region. Sugar-cane, cacao, coffee, and tobacco are the chief crops. Fort de France, the capital, is an important military center and naval station. St. Pierre, formerly the commercial center, was overwhelmed in 1902 by the eruption of Mount Pelée.

Dutch West Indies. The Dutch possessions in the West Indies comprise the islands of Saba, St. Eustatius, and St. Martin (the southern part) of the Lesser Antilles, situated southeast of the Virgin group, and Curaçao, Bonaire, and Aruba of the Leeward Islands. The total area of the colony is 403 square miles. The government is administered by a Crown Governor and a Colonial Council, all nominated by the sovereign. St. Martin has an area in the Dutch portion of seventeen square miles. The products are chiefly sugar and salt. St. Eustatius is volcanic in its origin. The inhabitants cultivate the fertile soil on the lower slopes of the mountain.

Curaçao, the largest of the Leeward group has an area of 210 square miles and it contains the town of Willemstad, the capital and seat of government for the whole of the Dutch West Indies. The climate, though hot and dry, is favorable to health. The soil is unproductive, but a little sugar and tobacco are grown, and also the sour orange, which is used in the manufacture of the liquor known to commerce by the name of the island. The chief product of the island is salt. Willemstad, which has an excellent natural harbor, is a free port, and the outlet of the colonial trade. The commerce of Curaçao is mainly with the adjacent West India islands and the United States. There is also a large trade with the Venezuelan coast. In the 17th century Curaçao and its dependent islands were governed from the present city of New York, then the capital of the Dutch possessions in America.

Danish Islands. The islands of St. Thomas and St. John, of the Virgin group, and St. Croix, farther to the south and distant about forty miles, all of which belong to the Crown of Denmark, have an area of 138 square miles. The chief products of the islands are sugar, rum, cacao, cotton, and logwood. The island of St. Thomas, the largest of the Virgin group, has a land surface of about thirty-seven square miles. Once the commercial metropolis of the West Indies, it is still very important owing to the excellent harbor upon which its capital is located. This city, officially known as Charlotte Amalie, is the seat of government of the islands. St. John lies almost within gunshot of St. Thomas on the east. It has a fine harbor, called Coral Bay, but aside from this the island is valueless. St. Croix has an area of seventy-four square miles. There are two towns, Frederiksted and Christiansted. known locally as West End and Basse End. The islands are inhabited mostly by free negroes, who employ chiefly a Spanish dialect although English generally is spoken at the ports. The acquisition of the Danish islands is desired by the United States and in 1902 a treaty for their purchase was negotiated, which was rejected by the legislative body of Denmark. The value of the islands lies in their excellent harbors.

FORT DE FRANCE, MARTINIQUE

Since the destruction of ill-fated St. Pierre, the only town of importance in Martinique is Fort de France, an attractive place, notably neat and thrifty. More than once disaster in one form or another has wrought havoc in the city, and its buildings, consequently, are of no great age, but the streets retain the peculiar narrowness of colonial West Indian towns and are picturesque in places.

CUBA

CUBA, the largest of the West India islands and strategically the most important, lies southeast of Florida and due north of the Isthmus of Panama. The area, including the Isla de Pinos and 1,300 adjacent keys, is variously estimated at 41,655 to 46,575 square miles. In government Cuba is a republic with a president and congress, whose respective powers are defined by a constitution modeled after that of the United States. The separate existence of Cuba as a republic dates from May 20, 1902, when the United States government relinquished its military administration.

The climate of Cuba, although everywhere tropical, is not wanting in variety within narrow limits. Inland, on the higher elevations, there is a wider annual range of temperature than on the coast, where the difference between the summer and winter means is only 11°, but the high temperatures are made trying by an oppressive humidity. The rainfall is ample, but for a tropical country not excessive.

PRESIDENT OF CUBA

Tomas Estrada Palma, elected president by Cuban revolutionists in 1877, but driven into exile, was again elected in 1901 and the next year formally inaugurated chief executive of the newly established republic.

Coast and Surface. On the eastern coast Cuba turns a rugged, terraced front, 600 feet high, to the sea, and elsewhere, except on the southern coast west of Cabo Cruz, the rise from sea-level is abrupt. The bluff, which in portions of the coast becomes a mountain cliff rising sheer from the water's edge to a height of thousands of feet, is bordered in many places by a narrow coral bench from ten to fifteen feet high. The only large island adjacent to the Cuban coast is the Isla de Pinos, thirty-seven miles southward. Nowhere between the Isla de Pinos and Cuba is there more than five and one-half fathoms of water, and on these shoals the coral reefs and islets rise to the surface of the water in a bewildering maze, clothed in vegetation. Similar reefs border the northwestern coast, making it dangerous to coasting vessels.

ROYAL COLLEGE OF BELEN, HAVANA

The Royal College of Belen is a school for boys, under the management of the Jesuits. The building which it occupies was erected in 1704. Connected with the school is a church and convent. The college is notable as the chief center of scientific study in Cuba and the possessor of a very interesting museum of Cuban products.

The loftiest mountains of Cuba are the Sierra Maestra, which parallel the entire southern coast of Santiago de Cuba Province. Midway between Cabo Cruz and the city of Santiago are many peaks that reach an altitude 5,000 feet above sea-level, and one, Pico Turquino, 8,320 feet in height. The mountains broaden out with diminished elevation between the city of Santiago and Guantanamo, assuming the form of a diversified plateau. In this region the name changes to the Sierra del Cobre, beyond which the uplift is continued throughout the whole of the eastern end of the province in a maze of hills. In Pinar del Rio on the west, a range of high hills, the Sierra de los Organos, extends from Cabo San Antonio eastward. In the southern part of the province of Santa Clara is a considerable area of rolling country, with a number of summits that are made notable by their contrast with the general low relief of the central provinces.

Hydrography. The nearest approach to a great river system is that of the Rio Cauto, the longest stream in the island. This river has its sources in the Sierra Maestra. Its length is 150 miles, and it is navigable for small boats from 80 to 100 miles of this distance, but sand-bars obstruct its mouth. Second in importance as a navigable stream is the Sagua la Grande, in Santa Clara Province, which is open to vessels for about twenty miles from its mouth. Since the prevalent white limestone formation is readily eroded by the action of water, much of the drainage of the island is subterranean; rivers disappear in cave formations, follow long courses underground, and reappear in unexpected places.

Along the southern and western coasts of the island are marshes. Elsewhere Cuba is remarkably well drained. Two great swamp areas exist, at the extreme west of Pinar del Rio and at The Zapata, partly within the province of Santa Clara and partly in Matanzas. The total area of the latter is about 600 square miles.

Flora and Fauna. The constant humidity of the air with the abundant rainfall assure to Cuba luxuriance and variety of vegetation found in no equally habitable region of the tropics. Despite the fact that during three centuries of active colonization in Cuba a large proportion of its surface has been cleared for cultivation, there remains a vast extent of forest, chiefly in the mountains of the east. The Organos Range is covered with pines; cedar, walnut, oak, and lignumvitæ abound in regions where conditions favor their growth, while among other valuable woods are included ebony, mahogany, grenadillo, majagua, ceiba (silk-cotton tree), and more than thirty varieties of palm. The royal palm grows almost everywhere in Cuba and is peculiar to the island.

PROMENADE AT LA PUNTA, HAVANA

In the shadow of the massive ramparts of old Fort Salvador de le Punta, which has since 1597 guarded the entrance of Havana harbor, is a pretty park overlooking the open sea, from whose waters it is protected by a great stone sea-wall. Here the splendid avenue called the Prado finds its end, joining the beautiful drive that turns away to the left. From the bandstand in the square the people often are entertained with music.

The native fauna of Cuba includes about 200 varieties of birds, a few saurians, fewer snakes, and only two or three indigenous mammals. The lagoons and the swamps are the haunts of the larger reptiles, the crocodiles and alligators, but no venomous serpents are found in Cuba. Wild fowl, especially ducks and pigeons, are abundant.

SUGAR-MILL NEAR MATANZAS

At each of the large sugar-cane plantations that are scattered over the Cuban Republic a great sugar-mill occupies a prominent place in the center of the estate. From it radiate narrow-gauge railways that convey cane from the fields to be ground. Great numbers of these mills were burned during the recent war and their loss has crippled the sugar industry of the island.

Resources. The wealth of the island consists, not in its mineral formations, but in its agricultural soils. For many years there has been no extensive mining of Cuban gold deposits. The copper deposits at El Cobre, a little north of the city of Santiago, are generally believed to be of extraordinary richness. These mines once supplied the bulk of the world's copper production. Lead and zinc mines have been located. Some coal is known to exist in the island. Asphaltum beds are found. Iron is the only metal the mining of which has thus far proved of importance. In the Sierra Maestra, a few miles east of Santiago, are found some very extensive deposits of brown and red hematite, and also a rich deposit of manganese, which has been worked in the neighborhood of Ponupo. Clays suitable for brick-making abound, but owing to the abundance of wood and limestone, this resource is undeveloped. There are extensive deposits of plaster.

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THE CATHEDRAL AT HAVANA

The cathedral to which the remains of Columbus were taken from Santo Domingo in 1796, and in which they remained until removed by the retiring Spaniards in 1898, is a stately edifice of Latin-Gothic style whose walls of coral rock have taken on a pleasing tint of antiquity. The interior, with its walls and floor of dark marble, its handsome columns and stalls of polished mahogany, and its high, vaulted ceiling, is very impressive.

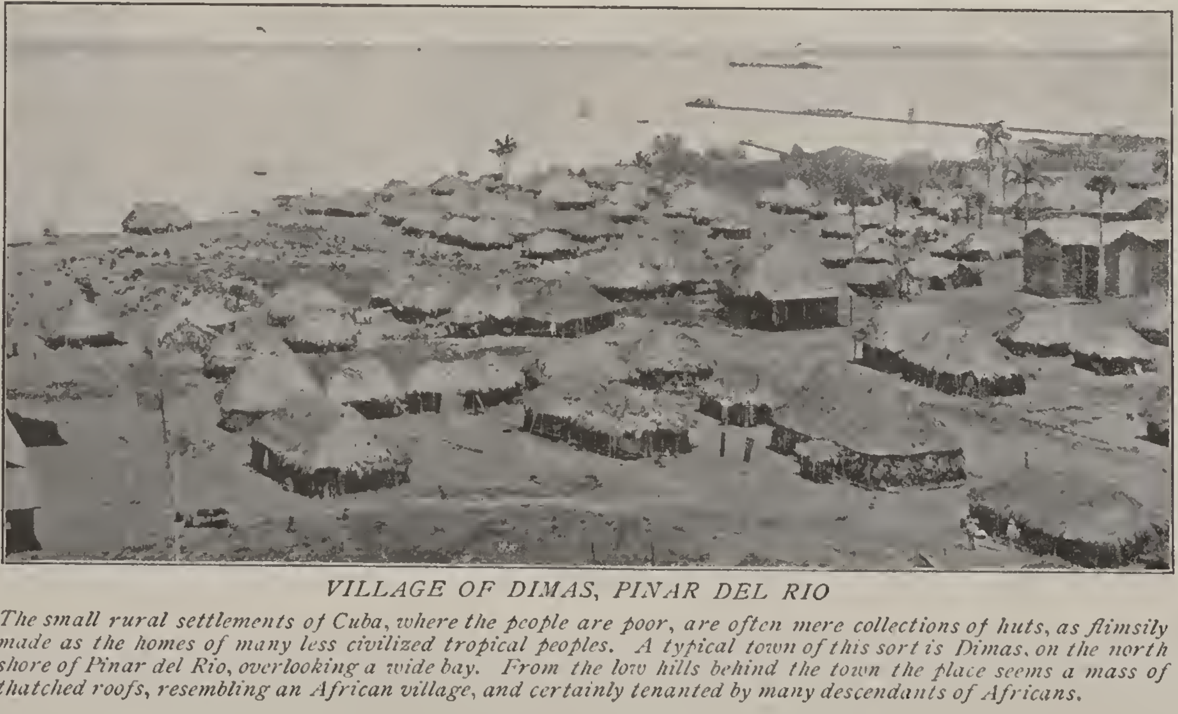
Agriculture is the real foundation of Cuban hopes of prosperity. Its fertile soil is peculiarly adapted to the growing of two important commercial products, sugar-cane and tobacco. Although severely tried by the ravages of war the sugar industry was not crushed and the new opportunities created by Cuban independence are fast restoring Cuba to its former rank as a source of the world's sugar supply. Tobacco culture ranks second among the industries of Cuba, and in the production of the choicest leaf the island has a natural monopoly. Pinar del Rio produces the bulk of the Cuban tobacco, and its product is distinguished in the trade by the name of the valley, "Vuelta Abajo," south of the Sierra de los Organos, where conditions of climate, soil, shade, and shelter from the north winds unite to produce a leaf having a flavor unequaled elsewhere in the world.

Tropical fruits grow with luxuriance and require scarcely any attention, and much rice is raised in the lowlands along the coast. Coffee culture formerly was a flourishing industry in Cuba, and in the eastern part of the island considerable acreage is yet given up to the plant. The most valuable fruits of Cuba are the banana, orange, lemon, lime, pineapple, and cocoanut. Cocoanuts are raised in the northeastern section, while pineapples are grown most extensively in the Isla de Pinos and in Western Cuba. The timber resources of Cuba are extensive, the forested areas being found chiefly in the provinces of Santiago and Puerto Principe. Cattle-raising is now becoming one of the most important industries.

Commerce and Cities. Railroad construction in Cuba has advanced rapidly since the recent war. Lines now traverse the island from Pinar del Rio in the west to Santiago Province in the east, connecting all the more important cities commercially. The wagon roads are usually very poor. Cuban commerce is chiefly with the United States. Textiles and food products are largely imported.

Havana, the capital, is built upon a level peninsula on the western side of the land-locked bay of Havana. Entrance to the spacious harbor is through a narrow channel, guarded by Morro Castle and other fortifications. Cigar-making is the leading industry. Havana is the seat of a university, founded in 1728. In its social customs and amusements, and largely in its elements of public life, Havana still continues to be Spanish. Santiago, capital of the eastern province of the same name, is the principal seaport on the southern coast of Cuba, is the center of the mining district, and has a flourishing trade. Matanzas is the outlet for an important part of the sugar region. Cienfuegos is situated on a land-locked harbor, one of the safest in the world. Cardenas has a trade in sugar, and the manufacturing industries of the city are extensively developed. Manzanillo is the seaport of the rich valley of the Cauto.

Naval Stations. Under an agreement with the Cuban Republic the United States has the right to maintain naval stations on the Cuban coast at Guantanamo, near the city of Santiago, and at Bahia Honda, fifty miles west of Havana. Over these stations Cuba retains its sovereignty, but actual control and jurisdiction is conferred upon the United States government. The station at Guantanamo as surveyed contains 18,530 acres fronting the bay and including some minor islands. At Bahia Honda the cession is of similar extent. At these points will be erected coal docks and warehouses guarded by extensive fortifications. In the future, should war arise, these naval stations will be of immense value in protecting American commerce in the Caribbean Sea and American interests upon the Isthmus of Panama.



VILLAGE OF DIMAS, PINAR DEL RIO

The small rural settlements of Cuba, where the people are poor, are often mere collections of huts, as flimsily made as the homes of many less civilized tropical peoples. A typical town of this sort is Dimas, on the north shore of Pinar del Rio, overlooking a wide bay. From the low hills behind the town the place seems a mass of thatched roofs, resembling an African village, and certainly tenanted by many descendants of Africans.

PORTO RICO

PORTO RICO, a dependency of the United States, is the fourth in size and the easternmost of the four great islands of the West Indies group known as the Greater Antilles. To the westward of Porto Rico and about seventy miles distant lies Haiti, separated from it by Mona Passage; eastward rise the Virgin Islands, the initial group of the series comprising the Lesser Antilles. The area of the Island of Porto Rico, including the four adjacent and dependent islands of Vieques, Culebra, Mona, and Muertos, is 3,606 square miles. The coast is low, with comparatively few indentations of any depth, and, unlike that of Cuba, the coast of Porto Rico is seldom bordered by fringing reefs or islets. The coast-line is about 360 miles in length, all parts of the island being easily accessible to the sea.

THE GOVERNOR

Hon. Beekman Winthrop of New York, an official of the Philippine civil service and judge in one of the insular courts, was appointed Governor of Porto Rico in April, 1904, assuming office in July following.

Surface Features. From east to west the island is traversed by a range of hills or low mountains, varying in height, but nowhere exceeding 3,487 feet, the extreme altitude being that of El Yunque, in the detached Sierra de Luquilla, in the northeast corner. The surface of the island rises gradually from the seashore, presenting a rolling, broken country, certain portions of the interior being marked by extensive plains, while along many portions of the coast are level tracts from five to ten miles in width.

A physical feature of the island is its remarkable water supply, nearly 1,300 streams being enumerated. Among the multitude of streams emptying northward are the largest rivers on the island, the Rio Grande de Loiza, Bayamon, Morovis, Arecibo, and Blanco, but they present little opportunity for navigation, being narrow and practically closed to shipping by the presence of sand-bars and spits. The rivers flowing southward from the great divide are short, with very steep descents, and are equally unavailable for commercial purposes. Eight coastal lakes of inconsiderable size exist. Among other noteworthy features of the island are a number of remarkable caves—those of Aguas Buenas in a village near Caguas, of Pajita in the town of Lares, and of Muertos in Utuado.

Climate. Porto Rico enjoys a generally equable climate. The average daily temperature is 80°, and cooling breezes prevail from the north during the hottest days. The warmest months are June, July, August, and September; the coolest are December, January, and February, the most agreeable season for the tourist being the months of January, February, March, and April. In the heat of summer the temperature on the sea-coast seldom rises above 95° Fahrenheit, and the nights are usually cool. The unpleasant features of the climate arise from excessive humidity in certain districts and the dampness of clear, dew-laden nights. In winter, or the dry season—from November to February—the mercury averages 80° Fahrenheit, being ten degrees less in the mountains. There is a much greater range of temperature during the night at this season than in summer, very seldom below 50°, but often 65° or 55° Fahrenheit, which means really cold weather to the Porto Rican.

The rainfall varies greatly in different parts of the island. In the northern lowlands the interception of the northeast trade winds occasions heavy rainfalls, occurring almost daily; the southern section is somewhat arid, serious droughts occurring, sometimes lasting three months, and in these seasons, owing to imperfect irrigation, this section suffers severely. The disagreeable land winds are seldom felt, but in common with other islands in this region, between July and October Porto Rico is swept frequently by terrific hurricanes, which sometimes do great damage.

Flora and Fauna. The vegetation of the island is varied and has been famous for its beauty. Plants valuable in pharmacy and the arts are frequent, the natives enumerating nearly thirty medicinal plants—some being employed as condiments, others in dyeing and tanning—with eight trees yielding resinous substances. Many tropical trees, especially palms, sandalwood, tree-ferns, and trees furnishing edible fruits, as the cocoanut, aguacate, orange, lemon, and mango, grow to perfection. The forests, however, once a characteristic feature of the entire island, have in most places disappeared. The small forested areas that remain are generally confined to the higher elevations of the mountains, the larger tracts of primeval forests being on El Yunque, in the Sierra de Luquilla. Here are large trees of a variety of valuable species, such as hard and soft Spanish cedar and ebony, besides others unknown in American markets, many of which are of great value. Ordinary timber, however, is very scarce, and that used in building is generally imported. The timbered area of the Sierra de Luquilla in the northeast now constitutes a forest reserve of 20,000 acres.

The fauna of the island is not remarkable. With the exception of a marine manatee, the agouti is almost the only indigenous mammal that exists. The most interesting of all land fauna is a gigantic tortoise. Vast numbers of bats occupy the mountain caves; many birds live in the mountains; the flamingo and other water-fowl frequent the coast. The hot climate favors the presence of swarms of noxious insects, though few, if any, poisonous reptiles are reported. Fish abound in the streams.

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THE GOVERNOR'S PALACE AT SAN JUAN

The official center of American rule in Porto Rico is the Governor's Palace, which contains, as did formerly the White House at Washington, the home of the executive, the governmental offices of the executive and his council, and the reception halls where the great social functions of official life are held. The palace is built upon a low, rocky cliff, close to the waters of the bay. Its foundations date from the 16th century, but its latest alteration was as recent as 1848, since which time it has not been changed essentially.

Natural Resources. Agriculture is the principal source of wealth open to the inhabitants. Of the total area more than three-fourths is included in farms, and not less than one-fifth of the land is under cultivation. Sugar-cane is the staple crop of the coastal plains; tobacco of fine quality is grown, and on the uplands excellent coffee is raised. Bananas, sweet potatoes, corn, rice, and cocoanuts are also cultivated. The pastoral interests of the island are extensive. The early settlers were for many years engaged in cattle-raising, and owing to the excellent pasture lands, which are covered with a nutritious leguminous plant and well watered by numerous streams, this is still a profitable industry. Large numbers of cattle are exported annually.

HARBOR OF SAN JUAN

The harbor of San Juan is a broad and beautiful landlocked bay, formed by the long, rocky peninsula on which the city is situated. The narrow entrance to the harbor is difficult of passage and a drawback to commerce, but it makes the city an ideal point for a naval base in time of war.

THE CENTRAL PLAZA AND CITY HALL, SAN JUAN — Copyright, Detroit Photo. Co.

Like all Spanish-American towns, San Juan has its open squares, girdled by closely set buildings. The Central Plaza, one of the more important of these, is dignified by the presence of the Municipal Building from which the city government is carried on and which has been used more or less, since the American occupation, as headquarters for United States officials. It is a rather attractive structure, with a façade of many arches and hexagonal towers at either corner.

Judging from futile explorations in neighboring islands, it may be presumed that deposits of the rarer minerals are wanting in Porto Rico in commercially profitable amounts. Iron ore, however, of good quality has been found at several places on the island, notably on the Rio Cuyul. Gold has been taken from many of the mountain streams, especially in the vicinity of El Yunque, in the northeast. This metal has also been found in the tributaries of the Rio Cibua, fifteen miles southward of San Juan, the natives washing it from the streams in the crudest way, as the early Spaniards did before them. Copper, lignite, lead, garnet, and other minerals have been found in small quantities, and limited deposits of mica are said to occur along the streams of the southern watershed of El Yunque. Marble is quarried for structural work. There are large deposits of gypsum, phosphate, and guano that are being worked.

IN THE BUSINESS QUARTER OF SAN JUAN

Allen Street is one of the typical thoroughfares of the business district. Here may be seen the city merchant who knows naught of plate-glass and lavish display of goods, but yet transacts much business in a quiet way. In his front apartment he keeps a small but well-selected line of merchandise, the bulk of his stock being stored away in the rear, where he also has his stable. On the upper floor live his family and clerks as one household.

Commerce. Under Spanish domination, means of transportation were of the most primitive and cumbrous description, foot-packers, ponies with baskets, and oxen being used even in the more important coffee districts, and the only means of transport to the seaboard being by pack mules over mountain trails. The military road from San Juan to Ponce bettered conditions, however, and under American rule the repair of old roads and construction of new ones has brought all the more important towns of the interior into communication with the seaports. The railway system of Porto Rico, when completed, will encircle the island. It now consists of two lines of road, each following the coast, and connected with one another by a stage line. The line on the north shore reaches from San Juan west to Camuy, sixty-two miles, a branch fourteen miles long extending from San Juan to Carolina and another six miles in length connecting Bayamon with the capital. Along the southwestern coast is a line of road eighty-two miles in length extending from Aguadilla via Mayaguez to Ponce.

The chief seaports of Porto Rico are San Juan and Arecibo on the north, Fajardo and Arroyo on the east, Ponce and Guanica on the south, and Mayaguez and Aguadilla on the west. In July, 1901, free trade went into effect between Porto Rico and the United States, and most of the island trade is now with the Republic. Sugar and molasses, cigars and tobacco, oranges, and coffee are the chief exports. The trade with Cuba, Canada, France, and Spain is also large. Steamship lines connect the island with New York, and there is much intermittent trade with New Orleans.

Chief Towns. In the main, the people of the island form a rural community. There are no great cities, the largest two being San Juan, the capital, and Ponce, which with its port constitutes practically but one city. San Juan, the largest

city, possesses more of historic interest and of general attractiveness than any other place on the island. It has one of the best harbors in the West Indies—though the channel is tortuous and difficult—and is of considerable importance as a strategic naval station. Its public buildings are the finest on the island. The natural advantages of this city's situation are excellent; occupying, as it does, a sloping hillside near the sea, it may easily be transformed into one of the most healthful and beautiful places on the island.

Ponce, lying at a considerable elevation above the sea, has an excellent situation and is generally considered the most progressive city on the island. Its port, La Playa, two miles distant, with which it is connected by a fine highway, has a good harbor and is well situated. Nearly one-fifth of the inhabitants reside at La Playa, where are situated the custom house, the wholesale business houses, and the consular offices of several nations.

Mayaguez is the most important place on the west coast. Its exports of coffee are second only to those of Ponce, while it leads all others in the shipment of fruits. Arecibo, on the northern coast, is situated on a shallow harbor and has a number of sugar-mills. Fajardo, on a river near the eastern coast, also has sugar-mills and is a shipping point for the exportation of tortoise shell.

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A PORTION OF THE MILITARY ROAD ACROSS PORTO RICO

There is one avenue of communication in Porto Rico that compels admiration—the great military road. This magnificent highway was built by the Spanish government at a cost of $4,000,000. It was designed for military purposes, and traverses the island diagonally, from San Juan to Ponce, more than eighty miles, being superbly macadamized throughout.

Government and Schools. For a time after Porto Rico passed under American control it was ruled by military government. Congress, on the 12th of April, 1900, passed a law providing for the civil government of Porto Rico and, on the 1st of May, following, the military rule ended. The insular government now consists of the Governor, appointed by the President of the United States, whose administration is carried on through a group of officers similar in nearly all respects to those that form the governments of ordinary Territories. Legislative power is vested in a bicameral body composed of a Council, appointed by the Governor, and a House of Delegates, whose members are elected by popular suffrage for two-year terms. There is also an insular judiciary, and the usual staff of officials representing the various activities of the Federal Government in its control over revenues, post office, and other matters. A resident commissioner represents the dependency at Washington.

Under Spanish rule only 10 per cent of the children of school age could read and write. A graded system of public schools for the entire island has been established by the new government, which has remodeled the entire system. The island has a board of education composed of two Americans and three Porto Ricans, and is divided into school districts, in each of which is an American supervisor. High, normal, and professional schools have been organized on the American model and are well attended.

Historical. In 1510 Juan Ponce de Leon established Spanish power in Porto Rico, but for many decades the native population stubbornly resisted the alien yoke. The island for three centuries of Spanish rule was only a penal station, but was the scene of many determined attempts at foreign conquest and brilliant repulses on the part of the Spaniards. French, English, and Dutch attacked the island at various times, and the constant attacks made by pirates and filibusters in the early half of the seventeenth century resulted in great injury to the Spanish colonists, many of them being so discouraged that they returned to Spain. In 1678 the British again attacked San Juan, but their fleet was almost wholly destroyed by a storm. Another British expedition in 1702 landed at Arecibo, but was repelled. Finally, the most formidable invasion the British had planned was undertaken in 1797, when Sir Ralph Abercrombie laid siege to San Juan and Aguadilla, but again they were obliged to retire.

Occupation by American troops took place without resistanee October 18, 1898, the cession of the islands to the United States being made by the treaty of December following. The history of the island since its formal cession by Spain has been one of internal development chiefly, great changes having been made by the introduction of American ideas of administration and by the opening of free trade between the island and the Republic.

THE PLAZA OF MAYAGUEZ

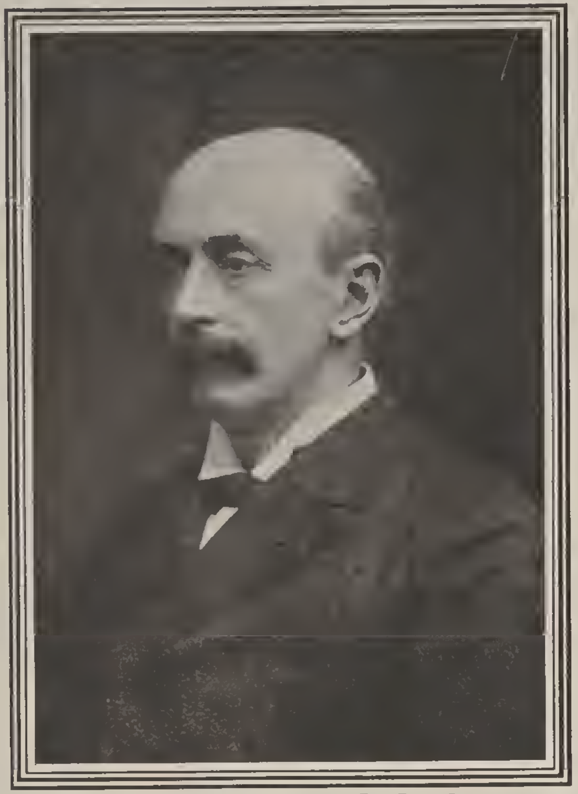
Mayaguez, a residence city of officials and wealthy planters, is notable for the beauty of its homes. Its plaza contains a magnificent statue of Columbus, whom tradition declares to have landed on the coast, spending a night on the site which is now included within the plaza's limits.

COUNTRY VILLAGE NEAR CAGUAS

Abject poverty has been for many years the lot of the lower classes of Porto Rico. These conditions still exist in the country hamlets, awaiting the changing touch of commercial development. In such places the visitor sees long lines of flimsy huts, ranged along either side of a narrow, ill-drained space called by courtesy a street, and peopled by families whose numerical strength in each separate case usually far outruns the resources available for their daily comfort.

BRITISH AMERICA

CANADA and other British possessions in North America cover an area only a little smaller than the Continent of Europe, somewhat larger than the United States and Alaska together, and equal to nearly one-third of the British Empire. The major portion is comprised in the Dominion of Canada, with an area, exclusive of the District of Franklin, of about 3,245,000 square miles. Of this area 3,119,000 square miles are land and 125,000 square miles are water. The average width of the territory available for settlement is about 500 miles; its greatest length, from west to east, is 3,400 miles. British North America has its only land boundaries on the irregular frontiers of the United States.



THE GOVERNOR-GENERAL

Earl Grey, made official head of the Dominion of Canada in 1904, is an English peer and came to his new duties with previous experience in colonial administration which he gained in South Africa.

Surface Features. The general slope of the surface is from west to east. The "backbone" of the continent, the Rocky Mountain system, extends along the west, its highest peaks from 15,000 to 19,000 feet above sea-level. The Appalachian system on the east has its northern outliers, extending for about 500 miles through the Canadian Maritime Provinces, but never attaining an elevation much above 3,000 feet. These two great mountain systems outline roughly two sides of a triangle, running close to and parallel with the converging eastern and western coasts of the continent. Within them may be traced a triangular Archæan formation, the oldest portion of North America. Within it is inclosed yet another divisional area, the shallow inland sea, called Hudson Bay, connecting with the Atlantic Ocean.

On a basis of surface configuration, the Dominion falls naturally into six distinct physical divisions, namely, the Arctic country, embracing the northern part of Canada; the Laurentian Highlands, containing intermontane valleys of large extent, and broken ranges north of the latitude of the Great Lakes, the Appalachian System, near the Gulf of St. Lawrence; the St. Lawrence Basin or region of the Great Lakes; the western prairies, rich with a soil pulverized by glacial action; and the Rocky Mountain belt, with intermontane arid valleys.

THE GOVERNMENT BUILDINGS AT OTTAWA

Crowning the summit of a great bluff that rises 160 feet above the Ottawa River are the stately Government Buildings of the Canadian Federation. They are three in number. Nearest the river is the Parliament Building, and flanking it on the east and south are the structures used for departmental offices. When the three buildings are viewed from the bridge that crosses the Rideau Canal close by, the group blends into a harmonious whole presenting the appearance of a single immense edifice.

Highland Areas. Labrador, described as the most uninviting country in the world for human habitation, maintains its fisheries on the eastern shores, and, with its rugged, picturesque scenery, attracts tourists during the few weeks of its summer season.

The Laurentian Highlands, rarely attaining a height of 4,000 feet, extend southwest from Labrador, curve westward above the Great Lakes, and stretch far northward west of Hudson Bay. They are the denuded platform of one of the most ancient and extensive mountain systems of the earth, and are, from an agricultural view, an irredeemable wilderness, though having rich forest and mineral resources. Over them, and far to the south and west overland, swept the ice sheets of the glacial age, the results of which were the remodeling of the land and the creation of not only the Great Lakes but of a multitude of minor lakes, ponds, and marshes. The surface of the highland region is a succession of rugged, weather-worn hills and irregular basins, barren in the northwest but densely wooded south and east, the entire district abounding in lakes and streams, with many forested swamps and grassy marshes. Beyond the borders of the highland broad and fertile plains alternate with the waters of the great lacustrine system that curves from Lake Ontario to Great Bear Lake. The Cordilleran region in the west includes the Rocky Mountains and the Coast ranges, together with the lesser ranges of British Columbia that lie between. The Cordillera is marked by high, rugged ranges possessing scenery of titanic grandeur.

The Plains. The vast region of the interior plains has for its boundaries the Arctic Ocean on the north, the Laurentian Plateau on the east, the forty-ninth parallel on the south, and the Rocky Mountains on the west. Its greatest width, at the south, is about 800 miles; its least, at the north, about 300 miles. Below the North Saskatchewan River are the Canadian prairies; north of it, the great forests of Banksian pine, poplar, and spruce growing on a rocky and sandy soil. The prairies are divided into three steppes, carrying the elevation, by successive slopes, from an average of 3,000 feet along the base of the Rocky Mountains to an average of 800 feet in the Winnipeg lake region.

Hydrography. The hydrography of British North America is of singular diversity. In the highlands between Lake Winnipeg and Lake Superior four great watersheds attain a common summit, about 1,000 feet above sea-level. The drainage to the north reaches Hudson Bay by way of the Albany River; that from the southern slopes ultimately finds its way to the Mississippi; to the west flow various streams into the Lake of the Woods and Lake Winnipeg, while the eastern slopes drain into Lake Superior. In the latter begins the St. Lawrence chain of lakes and rivers, draining an area of 530,000 square miles, pouring their gathered waters in one grand cataract over the Niagara precipice, and after a northeastward course of about 700 miles from Lake Ontario finally expanding into the Gulf of St. Lawrence. Another chain of great lakes —Great Bear, Great Slave, and Athabaska—borders the northwestern rim of the Laurentian Plateau, between which high land and the Rocky Mountains lies a basin of over 600,000 square miles, draining through the Mackenzie River into the Arctic Ocean. The territory in the

extreme northwest is watered by the Yukon River, which flows through Alaska into Bering Sea, while the western slopes of the Rocky Mountains are drained chiefly by the Fraser River and its tributaries. The Laurentian lakes, which belong in part to Canada, have a combined area of about 72,500 square miles.

THE THOUSAND ISLANDS, ST. LAWRENCE RIVER

Where the St. Lawrence River forms the international frontier the stream is broken into a maze of narrow and intricate passages by the myriad islets that project from the river's bed. The Lost Channel is a passage lying near to the Canadian shore and often is used by tourist boats. Its scenery, embracing a vista of rocky and wooded islands, is very beautiful and is typical of this portion of the river.

Coast and Climate. North of New England and on the northern shores of the continent the coast is generally bold and rocky, indented by deep inlets from the ocean, and fringed with a great number of outlying islands. The Bay of Fundy, the Gulf of St. Lawrence, and the great inland sea of Hudson Bay mark submerged lowlands that extend the continental shelf. On the western coast, between the parallels of 48° and 60° N., the shores of British Columbia and Southern Alaska are bordered in a remarkable way by hundreds of islands of various sizes and shapes, some merely bare rocks, others well wooded, most of them attaining considerable height, and all surrounded by deep water whose sheltered channels afford a navigable waterway of immense value to the coastwise trade of the Pacific. The phenomenon is due to subsidence in comparatively recent geological times, which has caused the most westerly valleys of the Western Cordillera to be submerged so that the peaks of the ranges appear above the surface of the ocean as islands.

The influence of a vast inland water area on the climate of British North America is self-evident. Extremes are to some degree moderated, and though, in the northeast, this beneficent effect is neutralized by the Labrador Current, which gives Labrador one of the severest of climates, in the northwest it is reinforced by the Japan Current. Rainfall, on the whole, is abundant. Only along the coasts is there excessive precipitation, while the extent of the arid plains is limited to an area of about 20,000 square miles. The precipitation along the western coast of Vancouver Island generally exceeds 100 inches in the year, but the Cascade Mountains deprive the sea-winds of much of their moisture, and between this range and the Rocky Mountains the annual rainfall is much less. The arid region is east of the Rockies.

Flora and Fauna. The flora of British North America is marked by diversity of class and by paucity of species. On the northeastern coast and the higher mountains of Labrador, as well as on the mountain summits of British Columbia, are found numerous representatives of the true arctic flora. The vegetation in the coniferous and aspen forests of British Columbia and the adjacent provinces is characteristic of northerly latitudes, while the plants of Eastern Canada belong to the distinctive American genera. Black and white spruce forests mark the northern tree-limit west of Hudson Bay the line stretching northwestward from the neighborhood of Fort Churchill. Spruces, larches, and aspens similarly mark the limit of the subarctic forest on the east, along a line drawn across the Labrador Peninsula.

The herds of buffalo that once roamed the prairie country of Canada, as of the United States, are now represented by a few protected survivors only, but the forests still harbor large numbers of other wild animals. Herds of Greenland caribou range in Northern Labrador and on the coasts and islands of the Arctic Ocean. The woodland caribou and the moose are numerous in the forests from New Brunswick to British Columbia, and the latter is found also in Nova Scotia. The Virginia deer roams the forests farther south. In Northern Keewatin are found the polar bear, musk-ox, polar hare, white wolf, arctic fox, and blue fox. Among other animals of the woods and mountains are the puma or mountain lion, wildcat, Canada lynx, gray wolf, black wolf, cross fox, red and gray foxes, wolverine, grizzly bear, mountain sheep, mountain goat, black bear, and martens, ermines, minks, otters, and others that are fur producers.

British North America is remarkable for the abundance and variety of its fishes and marine animals. Indigenous to Arctic waters are the whale, the seal, and the walrus. Of the several varieties of seals, some even appear in the Gulf of St. Lawrence, but only the harbor or

VALLEY OF THE BOW RIVER, IN THE ROCKY MOUNTAINS

From Banff, on the eastern slope of the Rockies, may be had a panoramic view of the Bow River, as it rolls its gathered volume down from the steeps of the continental watershed and winds through a forested valley to pour its waters upon the great plains beyond. Here, through some of the grandest scenery of the world, the transcontinental railroad finds its way across the mountains.

fresh-water seal has it habitat in both the Atlantic and the Pacific. The seas adjacent to British North America, on both the east and the west, are rich in food fishes, such as cod, shad, mackerel, herring, haddock, and halibut, besides oysters and lobsters. The rivers and lakes contain salmon, whitefish, trout, and other game-fish. The conditions accounting for the wealth of the fisheries explain also the abundance of water-fowl. Among game-birds may be mentioned the wild goose, plover, snipe, woodcock, partridge, and ptarmigan.

Resources and Commerce. Of all the vast resources of British North America, only the fisheries have been developed with anything approaching completeness, yet agriculture, horticulture, viticulture, dairying, and grazing, with millions of acres still unused, constitute the most productive industries. The value of the oats, wheat, peas, beans, barley, corn, rye, potatoes, and roots raised in Canada annually is far greater than that of the combined product of the forests, mines, and fisheries. Manufactures dependent upon agriculture are in a thriving condition. That of cheese has been so extended during recent years that Canada now takes first rank among cheese-producing countries.

MILES CANYON, IN THE YUKON BASIN

One of the routes formerly used to reach the Yukon gold fields lay over the lakes on the headwaters of the Lewes River. On the stream that connects Lake Marsh and Lake Labarge is Miles Canyon, which became famous through the experiences of adventurers who braved its perils. Here the swift waters are penned between perpendicular walls of basaltic rocks 100 feet high and make navigation full of dangers.

The forests of Canada are among the country's most valuable resources. Immense quantities of lumber and of wood pulp are annually exported to other countries. Next to the forests in value as a resource come the mines, quarries, oil wells, phosphate beds, and clay banks. Gold is mined chiefly in Yukon Territory, British Columbia, and Nova Scotia. Of nickel, the Sudbury District in Ontario contains the most valuable productive deposits in the world. The coal of Nova Scotia and British Columbia has an enormous annual output. Copper, lead, silver, petroleum, and iron ore also are mined profitably.

More than one-half of the manufactured goods produced in the Dominion are fabricated in the Province of Ontario. Quebec is second, and the Maritime Provinces produce the bulk of the remainder. Canada, however, is by no means one of the manufacturing countries of the world. Before the era of railways, canals had been dug, opening water communication as far west as the head of Lake Huron. The system includes seventy-three miles of channel along the St. Lawrence River and the Great Lakes, passing around obstructing rapids and the Falls of Niagara, and overcoming a rise of 600 feet between Montreal and the head of Lake Superior. The Sault Ste. Marie Canal enables vessels to pass St. Mary's Rapids, at the outlet of Lake Superior, on the Canadian side. Montreal, practically a seaport, is the eastern entrepot of trade and the outlet of interior products. The Dominion is spanned by an interlaced system of railways, the building of which has been aided largely by grants from the government.

Government and History. The Dominion of Canada is composed of nine Provinces, one Territory governed by a Commissioner, and four unorganized Districts. The Provinces of Quebec and Ontario embody what is known as Old Canada; Nova Scotia, New Brunswick, and Prince Edward Island are called the Maritime Provinces; Alberta and Saskatchewan, formerly called the Northwest Territories, now have Provincial government; Yukon Territory, since the influx of gold seekers, has been governed by a specially appointed Commissioner; while the unorganized Districts of Mackenzie, Keewatin, Ungava, and Franklin comprise the remotest and least developed portions of the Dominion. Newfoundland, remaining outside of the Canadian Federation, has a distinct colonial administration. The chief executive of the Dominion is the Governor-general, who is appointed by the British sovereign. Newfoundland is ruled by a governor similarly appointed.

In 1497, John Cabot, a Genoese by birth, but an Englishman by residence, sailed from Bristol, England, westward along the untraveled northern route across the Atlantic and reached the American continent somewhere on the eastern coast of British America. Portuguese, French, and Biscayan fishermen soon began to frequent the fishing banks. In 1534, Jacques Cartier explored in the St. Lawrence, and in the 17th century French colonies were planted in the Maritime Provinces and in the St. Lawrence Valley. From these colonies as a center, French influence was extended over all the valleys of the Great Lakes and the Mississippi. Newfoundland, however, remained a British possession. Beaten in war, France surrendered Canada to Great Britain in 1763. Canada remained a group of English dependencies until 1867 when the union of the leading colonies created the federated Dominion of Canada, which later accessions increased in extent.

M'LEAN CHANNEL, GEORGIAN BAY

Along the rocky coasts of Georgian Bay, an eastern extension of Lake Huron, are scenes of striking beauty. The country, almost a wilderness, embraces long stretches of primeval forest and rock-bound shore still unmarred by man. At several points are groups of islands enclosing narrow channels where the varied beauty of the region may be seen in its most charming form.

QUEBEC

QUEBEC, the capital of which is the oldest city in the Dominion, is a Province whose boundaries are in part undetermined. Only since 1898 has the eastern boundary of Ontario been established as the western line of this Province, while the exact limits of the portion of the Labrador coast belonging to Newfoundland have not yet been fixed. Considered within the boundaries authorized by Parliament in 1898 but not yet wholly demarcated, Quebec occupies a roughly rectangular area of about 351,873 square miles, an extent greater than the area of Old France. Of this area the water surface comprises 10,117 square miles.

CHURCH OF NOTRE DAME, MONTREAL

Facing the Place d'Armes is the great edifice of Notre Dame, which is one of the largest churches in America, seating 10,000 worshipers. To the right, as one faces the church, is the oldest building of Montreal, the Seminary of St. Sulspice, erected 1684. From the tower of Notre Dame, 227 feet high, can be seen the entire city and its rural suburbs.

Northern Quebec, which forms part of the peninsula of Labrador, is separated from the District of Ungava by a line that follows the East Main River from its mouth on James Bay to the northernmost point of Lake Patamis, thence running due eastward to the headwaters of the Hamilton River, which it follows to the undetermined boundary of the Newfoundland coast of Labrador. As far north as the fifty-second parallel, the boundary between Quebec and Labrador lies along a line drawn due north from Blanc Sablon Bay. Most of the Gulf of St. Lawrence, with Anticosti Island and the islands of the Magdalen group, is within the jurisdiction of Quebec.

Mountains and Lowlands. Within the Province of Quebec, diversified in contour, well watered, and in parts well wooded, there abounds mountain, forest, lake, and river scenery unrivaled in grandeur and picturesqueness. South of the St. Lawrence River lies the Acadian region, subdivided into the Eastern Townships and the Gaspé District. The backbone of the whole region is the Canadian extension of the Appalachian Mountain system, which, under the names Notre Dame and Shickshock mountains, parallels the course of the St. Lawrence River. These mountains, rarely exceeding 1,000 to 1,500 feet in height, but attaining an altitude of over 3,000 feet in the northeast, have their lowest elevation in the Eastern Townships, where the country is rolling and includes much land excellent for pasture and tillage. In the Gaspé Peninsula, the mountainous interior is a wilderness exposed to summer frosts, the St. Lawrence shore is a succession of fishing hamlets, and only in a strip from ten to twenty miles wide, where the land slopes to Chaleur Bay, is the timber good and the soil suitable for cultivation.

THE ST. LOUIS GATE, QUEBEC

The line of the ancient city wall of Quebec crosses St. Louis Street, which extends out toward the famous Plains of Abraham. Here stands, as in the old French days, the Gateway of St. Louis, wider now than formerly, but in general style much the same as when the wounded Montcalm passed through it on the day fatal to French rule in Canada.

The lowlands of Quebec comprise the fertile lands, dotted with lakes, lying within the obtuse angle formed by the Ottawa and St. Lawrence rivers. This plain is low only, by comparison with the Laurentian Plateau that adjoins it on the north and with the highlands to the south. From Quebec westward the elevation gradually increases until the plain is from 300 to 400 feet above the sea. All of Northern Quebec, which is the poorest region in the Province in agricultural resources, is included in the Laurentian Plateau. This vast table-land drains chiefly to the St. Lawrence River, and midway between this river and James Bay is the height of land that forms the water-shed. The northwestern corner of the Province belongs to the Hudson Bay basin, and drains to the Atlantic Ocean.

Rivers. The St. Lawrence River, one of the great streams of the Western Continent, flows northeast for 500 miles through the Province of Quebec. As far as Montreal it is navigable for the largest ocean vessels. The largest tributaries of the St. Lawrence are from the north. One of these, the Saguenay, the most important stream wholly within the Province, is remarkable for the picturesque scenery along its banks. It rises in Lake St. John and empties into the St. Lawrence near Quebec, showing soundings of from 1,000 to 3,000 feet in the latter part of its course. Its total length is 112 miles, and for 60 miles it is navigable for the largest ships. A longer but less important tributary from the north is the St. Maurice, 400 miles in length, but navigable for a short distance only. A far greater stream than these is the Ottawa, which rises among the plateau lakes north of Lake Nipissing, and flows to its junction with the St. Lawrence River. The river is 780 miles long, drains an area of 80,000 square miles, and has navigable stretches aggregating about 250 miles, the principal rapids and falls being avoided by canals. Fed all along its course by chains of lakes rather than by tributary streams, it expands from time to time into lake-like reaches and actual lakes.

Among the tributaries of the St. Lawrence from the south are the Chateaugay, which rises in New York; the Richelieu, the outlet of Lake Champlain; the St. Francis, the outlet of Lake Memphremagog; and the Chaudière, 120 miles long, which has its source on the Maine border. These streams water and drain the Eastern Townships. In the northern part of the Gaspé Peninsula, the Matapedia River rises in the lake of the same name, near the St. Lawrence, and,

after flowing across the peninsula, unites with the Restigouche only a short distance above the entrance of the latter into the waters of Chaleur Bay.

Gulf of St. Lawrence. The great estuary and gulf of the St. Lawrence, from a point a few miles below Quebec, have the border of the Laurentian Plateau for their northern banks. At Quebec, where the width of the river is less than a mile, the spring tides rise 18½ feet, and tide-water extends to Three Rivers, midway between Quebec and Montreal. The action of the tides greatly facilitates navigation, which otherwise would be considerably impeded by the winds that sweep through the valley. Just below Quebec the St. Lawrence widens, flowing in two channels around the fruitful Isle of Orleans, twenty miles long and six miles wide. This island passed, the river retains its increased breadth. At the mouth of the Saguenay River it is twenty miles wide; at Matane, thirty miles. At Point de Monts the estuary ends and the gulf begins, quickly widening until, at Seven Islands, the distance from shore to shore is eighty-one miles. Beyond this point the gulf is divided into two channels, separated by the island of Anticosti, which is 140 miles long and thirty miles wide. The island soil is of fair quality, but the summer frosts are unfavorable to agriculture. The surface slopes southward from the limestone cliffs at the north, which rise to an altitude of 700 feet. The only harbor is in Ellis Bay, which has a depth of eighteen feet. South of Anticosti and likewise within the jurisdiction of Quebec are the Magdalen Islands, adapted to grazing, but not to agriculture.

OUIATCHOUAN FALLS

Near Roberval, on Lake St. John, the Ouiatchouan River dashes over the rocky terraces in a mass of foaming cascades and flying spray that can be seen, embowered in forest, from far out in the lake, so close are the falls to the river's mouth.

Climate and Products. The climate of Quebec is variable and rigorous. The mean January temperature is 13.5°. The mean July temperature is 70.2°. The mean annual temperature is 42.6°. The mean annual range is about 114°. The temperature often falls to 20° below zero in winter and as often closely approaches 90° in summer The severity of the winters is greatly modified by the remarkably dry, bracing atmosphere.

Agricultural pursuits claim the attention of a majority of the people. Crops of wheat, barley, hay, and oats, rye, buckwheat, flax, pulse, potatoes, turnips, carrots, celery, beets, and parsnips thrive, and melons, plums, apples, and small fruits are largely grown, while in the warmer parts of the Province grapes are raised successfully. The forests, too, provide a food product of great value, absolute and relative, in maple sugar, of which millions of pounds are produced annually. Large numbers of horses and cattle are raised, while dairying and poultry raising are largely on the increase in the Province.

BREAKNECK STEPS, QUEBEC

From the modern Upper Town to the quaint section of the old Lower Town, in Quebec, the way leads down steep descents which are often very trying to those not to the manor born. One of the most abrupt of these bears the formidable name of the Breakneck Steps. It follows the line of an ancient hill path.

LA SALLE'S HOUSE, BUILT 1669

When the French explorer, now honored throughout all the Great West, returned baffled from one of his earliest attempts to reach Asia by way of the Great Lakes, he built himself a house upon his property a few miles above Montreal. Jeeringly his French neighbors called it "La Chine," China. Both house and joke endure, for the town Lachine has grown up near the explorer's old home.

Forests. The forested area is large, and the timber industry is, next to agriculture, the most important in the Province. The forests are singularly rich in species. The subarctic forest, which extends south as far as the Hudson Bay water-parting, includes the Banksian pine, spruces, firs, larches, birches, and aspens. The conifers and birches reappear in the damp, cold sea air of the Atlantic and Gulf of St. Lawrence coasts, but in the interior of Acadian Quebec deciduous trees predominate. The maple, both hard and soft, grows in such profusion that its leaf is the Canadian emblem. Among other deciduous trees are the cherry, ash, elm, oak, and beech. Passing beyond the border of the Laurentian Plateau, the beech, red cedar, and white oak disappear, giving place to the sugar-maple, white cedar, and red and white pine, followed by spruce, poplar, and basswood.

Chief Industries. The city of Quebec is the center of the provincial lumber trade, where, too, a flourishing tanning industry has been established, owing to the abundance of hemlock and the extent to which cattle are raised in the Province. Most of the lumber manufactured in Quebec is exported to the United Kingdom, which also affords a market for nearly all of the leather product.

The mineral production of the Province is comparatively insignificant. The asbestos product is the largest single item. Clays occur suitable for brick making, an established industry, and limestone is quarried for building stone and the making of lime. Other mineral products are gold, silver, iron, copper ore, granite, slate, mica, cement, galena, phosphates, and graphite, but the output of none is large, and as a whole the mineral resources of Quebec are but slightly developed.

OLD STREET IN QUEBEC

In Little Champlain Street, with its narrow width and its curious old weatherbeaten houses, the French quarter of old Quebec shows a typical side. It is precisely like the ancient streets of some old cities in France itself.

CAPES ETERNITY AND TRINITY

The Saguenay River, flowing from Lake St. John, rolls mile after mile between bleak, rocky walls, reaching the climax of its scenic grandeur at Eternity Bay, on either side of which the gigantic bulks of the twin capes, 1600 and 1800 feet high, rise in naked precipices sheer from the river's surface, towering above the passing boats that creep in their shadow.

The fisheries of Quebec in the estuary and gulf of the St. Lawrence, in Chaleur Bay, and off the coast of Labrador and the Magdalen Islands, as well as in the numerous inland fresh-water streams and lakes, are valuable. The chief catches are cod, herring, lobsters, salmon, mackerel, smelts, halibut, sardines, and haddock. While deep-sea fishing is commercially the most important branch of the industry, the fresh-water fisheries are also of great value, both for their export products and for home consumption.

The manufacturing establishments of Quebec are numerous, the Province ranking second in the Dominion in the quantity and value of goods manufactured. Among articles that are successfully manufactured are lumber, flour, cheese, textiles, furniture, leather, paper, boots and shoes, agricultural implements, iron, hardware, sugar, chemicals and soap, beer and spirits, edge-tools, and india-rubber goods. Shipbuilding, which formerly was a leading industry, has declined notably in importance owing to the development of iron and steel construction. The wood-pulp industry has become important and is rapidly attaining large proportions.

Important Cities. Montreal is admirably situated from a commercial point of view. The city is about 300 miles nearer Liverpool than is New York, and is connected by waterways with the interior provinces and the Atlantic States. As a result of the burning of the Parliament buildings in 1849 by a mob, Montreal ceased to be the capital of Canada, which was for a time located at Quebec, being later removed to Toronto, and finally to Ottawa.

Quebec, the seat of the Provincial government, has not kept pace with the development of the country, its growth in population in recent years having been but small. Since it is the chief city of French Canada, its population is mainly French and Roman Catholic. It is the seat of the historic Laval University, founded in 1663 by the first bishop of Quebec. Among the causes that have retarded the city's development are the destruction of its shipbuilding industry through iron supplanting wood in construction; the diversion to the United States of the export timber trade, which formerly went by way of Quebec to Great Britain; and the deepening of the channel, whereby Montreal has become the head of navigation and profited at the expense of the Provincial capital.

Sherbrooke is the chief center of cotton and wool manufacturing in the Eastern Townships. Sorel, at the mouth of the Richelieu River, has several shipbuilding yards and foundries and thrives on the trade of the agricultural country of which it is the center.

Government. The Province of Quebec is divided into sixty-three counties. The executive functions are vested in a Lieutenant-Governor, appointed by the Governor-General of Canada, assisted by an Executive Council of eight members. Legislation on matters solely affecting the Province is intrusted to a Legislature of two Chambers. The twenty-four members of the Legislative Council are appointed for life; the seventy-four members of the Legislative Assembly are elected by the people every five years. Quebec's representation in the lower house of the Dominion Parliament was arbitrarily fixed at the time of confederation at a minimum of sixty-five, the representation of the other Provinces being made proportional thereto, in order that the French element in Quebec might be safeguarded in their interests. The Province has twenty-four representatives in the Dominion Senate.

Under the fundamental law of the Confederation, the Protestant minority in Quebec is guaranteed the same privileges as regards education as are enjoyed by the Catholic minority in Ontario. Inasmuch as the French Catholics outnumber the Protestants in the proportion of six to one, religious instruction is a prominent feature in education. The Catholic public schools are frankly denominational, and the Protestant schools, although necessarily non-sectarian, are not without religious influence. The legislative grants for elementary and higher education are divided according to population.

SPINNING AT CAP À L'AIGLE

ONTARIO

ONTARIO, a Province occupying about one-fifteenth of the land area of the Dominion of Canada, is very irregular in outline, its boundaries being formed in large part by natural waterways. At the northwest Ontario impinges on James Bay. On the southern borders it touches the Great Lakes and the St Lawrence River. The total land area of Ontario is 220,508 square miles, slightly greater than that of Germany; the water area, exclusive of the Canadian portions of the Great Lakes, is 2,350 square miles.

Surface Features. Ontario has everywhere an undulating or hummocky plain. Toward the north the land rises very gradually to a height of about 1,200 feet above the sea and forms the watershed between the St. Lawrence basin and the Hudson Bay basin. This watershed, called the Height of Land, is not a ridge, but might rather be called a low plateau, extending in a sinuous course from northwest to southeast. Roughly parallel to the Height of Land are two other low watersheds that cross the Province. One, beginning at the Thousand Islands of the St. Lawrence, extends northwesterly to the northern shores of Lake Huron, where it forms high, rocky cliffs. The other, called the Niagara Escarpment, reaches from the southwestern shores of Lake Ontario northwesterly to Bruce Promontory at Georgian Bay. South of the Niagara Escarpment are almost level plains extending to the shores of Lakes Erie and Huron and forming splendid farming country. Between the Niagara Escarpment and the watershed to the north of it is undulating country, draining in one direction toward Lake Ontario and in the other toward Georgian Bay, but nowhere assuming any characteristic variations. Still farther north is the forested basin of the Ottawa River, which extends westward and merges into the slopes that drain toward Lake Superior. North of the Height of Land the surface slopes gently toward James Bay.

PROVINCIAL PARLIAMENT BUILDING, TORONTO

In the northern part of Toronto, near Queen's Park, is situated the Parliament Building of Ontario. Around it lies one of the most attractive portions of the city. The architecture of the building is of the Neo-Grecian style, giving it a variation from customary forms that is decidedly pleasing, despite the contrasting effect of the roofs. Across the open lawns in front of the building broad walks extend to the roadway, enclosing a handsome statue of Sir John MacDonald, the Canadian statesman.

Waterways. Ontario has no large rivers entirely within its limits, although it borders on several that have commercial importance. The chain of Great Lakes with their connecting rivers, stretching along the southern and western bounds of the Province, is one of the great commercial waterways of the world. On the eastern border of the Province lies the Ottawa River, whose course, broken by falls, is navigable for considerable distances. In the southern portion of Ontario are mainly short streams of no special value. In the north, however, many are utilized for logging purposes and some are capable of giving valuable water-power to future settlers.

There are a number of lakes in the Province. Lake Nipigon, seventy miles long and forty miles wide, drains into Lake Superior, and will in time have practical importance as a waterway. Lake Nipissing, north of Georgian Bay, forms part of a natural water route from Lake Huron to the Ottawa River. Lake Simcoe, southeast of Georgian Bay, lies in the settled area of the Province and affords steamer transportation between the villages upon its banks.

A GLIMPSE OF LAKE ROSSEAU, MUSKOKA LAKES DISTRICT

Eastward from Georgian Bay extends a stretch of rugged country in which lies the celebrated Muskoka Lakes District. It is mainly a forest region, thickly wooded, and populous with animal life, but here and there are little settlements and resorts for summer visitors. Lake Rosseau is one of a chain of connected lakes, tortuous in outline, dotted with rocky islands, and abounding in scenery of great beauty.

The commerce of the St. Lawrence basin is aided by several artificial waterways located in Ontario. The most important is the Welland Canal, which connects Lakes Erie and Ontario. Of lesser importance are the canals which aid traffic at Sault Ste. Marie, and extend around the unnavigable parts of the St. Lawrence below Kingston.

Climate, Flora, and Fauna. The climate of Ontario's tableland region is made only slightly more moderate than that of the corresponding latitudes of Quebec by the influence of the great inland seas that lie to the south, but the Western Peninsula is the most temperate region of Canada. In that water-inclosed district precipitation is ample, drainage is good, extremes of temperature are less rigorous, and the mean annual temperatures, in the main, are

VIEW FROM THE OLD FORT EAST OF KINGSTON

Kingston, commanding the outlet of Lake Ontario, is a strategic point of considerable military importance. For this reason the peninsulas east of the town were strongly fortified in years past, and their stone bastions and martello towers, although useless against modern artillery, are still garrisoned. Back of the defenses on the point nearest the city are the buildings of the Royal Military College, where cadets are educated for military service.

those of New York and the New England States.

Originally the whole of the Province was covered with dense woodland, but settlement has brought about the denudation of the southern portion. In the part bordering upon Lake Huron are found the oak, hickory, tulip-tree, dogwood, honey-locust, sour gum, crab-apple, and other varieties of trees and plants which are common to the United States just south of the Great Lakes. Farther north the forests are subarctic in character and the spruce, pine, and tamarack cover immense areas. The large wild animals have disappeared from the southern and eastern sections before the encroachments of civilization. In the northern and western wilderness, however, the deer, cariboo, black bear, wolf, wild cat, lynx, rabbit, racoon, and beaver are found in small numbers. The goose, duck, woodcock, plover, and snipe are among the more commonly known game-birds of the Province.

Agriculture. The favorable climate and fertile soil of Ontario have made it the leading agricultural Province of the Dominion. The moderation of climate as one passes southwest of the Ottawa

TRINITY COLLEGE, TORONTO

Situated in the pleasantest part of Toronto is Trinity College, an educational institution for advanced study, conducted under Anglican auspices. The college buildings are beautiful examples of the later form of Gothic design.

River is remarked in the character of the crops that can be raised and in the varieties of forest growth that flourish. In the region known as the Niagara District, bordering on Lakes Erie and Ontario and the Niagara River, peaches grow unharmed by frosts save in exceptional seasons, and apricots, nectarines, quinces, grapes, plums, apples, berries, and small fruits of many kinds find conditions of soil, sunshine, and moisture suited to abundant production. Fruit growing is equally successful in the section bordering on Lakes St. Clair and Erie and the Detroit River.

Wheat grows in almost all parts of the Province. Oats rank next as a cereal crop. Throughout the Western Peninsula the season is long enough and the sunshine sufficient to bring maize to maturity, and in the Lake Erie counties even the tall southern varieties are raised. The six-rowed barley of Ontario not only finds a ready export market, but serves as the basis of a profitable malting industry. Potatoes form a staple crop of great annual value. Other customary crops are rye, buckwheat, peas, and hay. Cattle-raising is carried on in all parts, and dairying has been developed to an extent that has made the butter and cheese of this and neighboring provinces very important among the export products of the Dominion. The large number of sheep owned has made possible a large annual wool clip.

Forests and Fisheries. The forests of Ontario are to be considered among the most important of its sources of wealth. Lumbering has always been one of the great industries of the Province. In recent years the government has provided regulations designed to prevent deforestation and to husband the great wealth of the woodland areas. The output of pine timber, of which there are no certain statistics, is already large, and the building of new railroads will increase the amount enormously by making accessible districts that are now too secluded for profitable operation. From Ontario comes also a considerable part of the immense pulp-wood output that is exported from Canada to the United States. The spruce forests furnish the bulk of this particular product.

Ontario is debarred from ocean fisheries at present, but there is a possibility that salt-water fisheries may yet be developed in Hudson Bay, with an Ontario port as the home of the fishing fleet Thus far, however, the fisheries of the Province are those of the Great Lakes and interior rivers. Trout, whitefish, herring, pickerel, pike, sturgeon, maskinonge, and bass are the chief catch.

Mineral Resources. To the mineral resources of the New Ontario, north of Lakes Superior and Huron, the Province is looking for its greatest future development. In the Rainy

UNIVERSITY COLLEGE, ON THE CAMPUS OF TORONTO UNIVERSITY

The University of Toronto, which includes a number of affiliated schools, is one of the greater educational institutions of Canada. To the west of Queen's Park, in Toronto, is the campus of the University, among whose buildings the most striking in appearance is that of University College, built in the Norman style of architecture, with massive proportions whose effect is heightened by the presence of a huge central tower. The view from the tower embraces the whole city and its environs.

River, Thunder Bay, and Algoma districts, where free-milling gold quartz has been found, little systematic prospecting has been carried on, but a number of mines and stamp-mills worked on the sites of random gold discoveries have a satisfactory output. Some silver is produced in the Province. Iron has long been mined at South Crosby and an immense steel plant at Sault Ste. Marie is designed to utilize the ores of the Superior region. The Sudbury mines in the District of Algoma produce nearly one-half the world's supply of nickel. The value of the petroleum output of Ontario is greater than that of any other mineral product, and this is the only Province in the Dominion where petroleum is produced in considerable quantity. Natural gas also is found, the principal fields for both oil and gas lying in Lambton, Essex, and Kent counties. Enough salt exists to supply the Province, if not the Dominion, for centuries. Silver-lead ores have been mined near Kingston.

LUMBERING SCENE, THUNDER BAY DISTRICT

In the Thunder Bay District, north of Lake Superior, and in other portions of Northern Ontario, the development of the forest resources is a characteristic industrial feature. Great quantities of spruce lumber are brought into the market from this section of the Dominion. For the manufacture of wood-pulp, the basic material of modern paper-making, the spruce wood is essential.

Chief Cities. The commercial and political capital of Ontario is Toronto, situated on a bay on the shore of Lake Ontario. It has an excellent harbor, over three square miles in extent. Besides being the seat of the Provincial Government, this city is the chief center of the domestic trade, and the religious and educational activities of Ontario. It is also the seat of the University of Toronto, administered under Government supervision. Ottawa, the capital of the Dominion, is the second city of Ontario and the center of the Canadian lumber trade. The Chaudière Falls block navigation here and at the same time furnish enormous water-power for the sawmilling industry, the paper and pulp mills, and other factories.

VIEW OF THE WATER FRONT OF RAT PORTAGE, ON THE LAKE OF THE WOODS OUTLET

In the western part of the Dominion of Canada, as in the United States, there are rapidly growing towns which are centers of trade for extensive regions. Rat Portage, picturesquely situated at the outlet of the Lake of the Woods, is one of these. The Winnipeg River, flowing northward toward Lake Winnipeg, passes the town and by a fall of about twenty feet affords valuable water-power, to which local prosperity is largely due. Viewed from the wide river the town has a striking appearance, owing to its situation upon rising ground.

Hamilton, at the head of Lake Ontario, is important as a manufacturing town, as a lake port, as a railway center, and as an outlet for the adjacent Niagara fruit district.

Kingston, situated on the best harbor on Lake Ontario, and occupying the site of Frontenac's fort, built in 1673, is the point of transshipment for grain brought down the lakes for ocean vessels.

London, on the Thames, is the center of the richest farming district of Western Ontario and the largest of the cities located inland. Brantford, on the Grand River in the heart of the peninsula, has a thriving trade in dairy products and is an important industrial center. Guelph, forty-eight miles west of Toronto, is a shipping point for cattle, hogs, and agricultural products, and has also a number of factories. St. Thomas is an important railway center and the seat of various flourishing manufacturing plants.

Windsor, near the discharge of Lake St. Clair into the Detroit River, is an important railway and traffic point. Sarnia, at the foot of Lake Huron, is also a traffic point. Sault Ste. Marie has an important lake trade, owing to its situation on St. Marys River between Lakes Superior and Huron. Fort William, on Lake Superior, is an important grain port.

FLOURING MILLS AT KEEWATIN, RAINY RIVER DISTRICT

Historical. The French pioneers of Quebec carried on trade in Ontario and erected a fort in 1673 on the site of Kingston. The first settlement of Toronto was by the French in 1749, when Fort Rouillé was built to serve as a barrier to trade between the Indians of the north and the English around Oswego, at the opposite end of Lake Ontario. The French having evacuated this fort, Governor Simcoe in 1793 occupied the site. At the close of the American Revolution immigration of royalist refugees from the United States took place. Grants made by the Crown to these colonists were divided between the Maritime Provinces and the region north of the Great Lakes. By this was founded the Province incorporated in 1791 as Upper Canada and known since 1867 as Ontario.

THE MARITIME PROVINCES

THE MARITIME PROVINCES of Nova Scotia, New Brunswick, and Prince Edward Island, once called Acadia by the French, lie south of the Gaspé Peninsula of Quebec and, with Newfoundland and Labrador, inclose the Gulf of St. Lawrence. Three systems of hills, with a general direction from southwest to northeast, diversify the surface. From the southwest corner of New Brunswick two chains of eroded mountains form in part the boundary between the Province and Quebec. The southern range, with an elevation not exceeding 1,050 feet, fronts on the Bay of Fundy and preserves the southern coast from marine waste. The northern diagonal range extends from Chaleurs Bay and forms the water-parting between the Miramichi and Richibucto rivers, and other streams. It has a general elevation of from 1,000 to 1,500 feet, and an extreme height at Bald Mountain of 2,470 feet. Through the center of the northern counties of Nova Scotia stretch the Cobequid Mountains, the summits of which reach elevations of 1,000 and 1,200 feet The main portion of Nova Scotia, like the neck that joins it to the mainland, has its mountain ridge extending through the center, from Cape Sable on the southwest to Cape Canso on the northeast.

Rivers and Climate. The great river of New Brunswick is the St. John, which, rising in Maine, has a drainage area of 26,000 square miles. The St. Croix River, which flows south to Passamaquoddy Bay, affords anchorage sufficient for a large navy and is open the year round. The river is navigable for large vessels for twenty-five miles from its mouth. The Miramichi River, which ranks next to the St. John, drains an area of about 6,000 square miles in the heart of the Province. This river is navigable for thirty-five miles from its mouth in Miramichi Bay. Southeastern New Brunswick is drained by numerous small rivers, some discharging into estuaries on the coast of Northumberland Strait, others into the Bay of Fundy. Nova Scotia and Cape Breton Island, although their watersheds are narrow and their rivers necessarily short, may easily be traversed by canoe, for the streams and lakes are numerous and well connected and the portages between head waters are in the main short and not arduous.

DOMINION BUILDING, HALIFAX

Prominent among the public buildings of the Canadian seaport is one of brown freestone with a granite basement, devoted to the use of the Dominion government. On the ground floor is the post office and custom house, while on the upper floors are the treasures of the Provincial museum.

Central New Brunswick only has a continental climate like that of Quebec, all the remainder of Acadia lying open to the influence of the sea. The Labrador Current and the ice carried by it from the Arctic Ocean are responsible for the late springs and temperate summers, and the mere proximity of the ocean for the moderate winters.

Flora and Fauna. The prevailing humidity favors growth of spruce, birch, and fir, but in Prince Edward Island the hardwood trees grow near the coast. In the interior of each of the three Provinces are found the hard and soft maple, birch, ash, poplar, pine, spruce, elm, oak, beech, fir, hemlock, and tamarack. The ironwood, red ash, cherry birch, scrub pine, and the black willow occur in New Brunswick and Nova Scotia, and, in New Brunswick alone, the basswood, the mossy-cup oak, and the butternut are found.

The interior of New Brunswick is a wilderness that is especially attractive to sportsmen. Through the great stretches of woodland roam the moose and the caribou, besides a multitude of smaller wild animals. The streams abound in fish, of which the salmon is the best known.

HALIFAX AS SEEN FROM THE CITADEL

From the heights 255 feet above the sea, where a massive fortress looms, a bird's-eye view over Halifax and its harbor is interesting and suggestive. From this point the city, with its spires, roofs, and forest-like residence districts, is typical of New World civilization. Thought recalls also that it is in British eyes the most important point in Canada, for here is the chief center of Britain's military and naval power in America. As a source of unlimited coal supply, terminus of the whole Canadian railway system, good winter harbor, nearest American port to Great Britain, and splendidly fortified place of refuge, England prizes it as one of its great strategic positions. It is a guaranty against invasion by any European power.

NEW BRUNSWICK

The largest of the Maritime Provinces, New Brunswick, has an area of 27,985 square miles. It is represented in the Dominion House of Commons by thirteen members. The Lieutenant-Governor of New Brunswick, appointed by the Governor-General, is assisted by an Executive Council of seven members. The legislative functions are vested in a single chamber of forty-six members. The schools, which are free and undenominational, have public support.

Resources. The forests and fisheries are the chief resources of New Brunswick. The principal catch consists of herring, but smelts, cod, salmon, sardines, and lobsters figure largely in the aggregate of the annual output.

Large areas in the north and northwest are heavily forested, chiefly with pine, cedar, and spruce, which form an important source of wealth. The shipbuilding industry has declined since iron and steel began to supplant wood in the construction of ships, but lumbering operations are still profitable The Province contains 14,000,000 acres of agricultural land, but only a small part of the arable land is under cultivation The principal crops are spring wheat, buckwheat, potatoes, turnips, oats, and barley. In the river valleys and in the marshes at the head of the Bay of Fundy the land is exceedingly fertile, and the yield has shown a steady increase during recent years.

The mineral resources of the Province are extensive but largely undeveloped. Gypsum is the chief product, the available supply being practically inexhaustible. Coal measures are found in the area drained by the Miramichi River. Iron ore exists in abundance, and manganese, copper, and antimony are also found. The excellent transportation facilities, together with the nearness of the coal supply, favor the development of industrial enterprises.

Important Cities. Fredericton, the provincial capital, has a large lumber trade. St. John is the chief city of New Brunswick. Its large harbor is exceptionally good, and maritime industries still occupy a large proportion of the inhabitants. Manufactures include cotton and woolen goods, machinery, railway material, leather, and paper. The extension of the Canadian railway system has increased the business of the city as a winter port, the route by way of St. John being the shortest available to Liverpool. Moncton is a manufacturing town and a center of trade with Nova Scotia. Among the products are flour, woolen goods, cotton, leather, and machinery. Chatham, the chief town on the gulf coast, on an excellent harbor where the Miramichi empties, is the center of a flourishing lumber trade.

ROCKS AT HOPEWELL CAPE

Where the waters of the Bay of Fundy ebb and flow in Chignecto Bay, the point of Hopewell Cape is a landmark. Here curiously shaped rocks, worn into odd forms by the rush of the great tides are pointed out to the traveler.

FALLS NEAR HALIFAX

Among the most beautiful of the scenic effects in the south shore counties of Nova Scotia are the cascades that here and there mark where the streams descend sharply from the elevated inland forests toward the sea, often carrying with them great logs and other debris.

NOVA SCOTIA

Occupying the great southerly peninsula, connected with New Brunswick by a narrow neck, the Province of Nova Scotia has an area of 21,428 square miles. The Lieutenant-Governor of Nova Scotia is appointed by the Governor-General. The Executive Council consists of nine members. There are two legislative chambers, the Legislative Council with twenty-one members and the Legislative Assembly with thirty-eight members. Nova Scotia has ten Senators in the upper house of the Dominion Parliament and eighteen members in the House of Commons. The educational affairs of the Province are supervised by an Executive Council. Instruction in the public schools is free and undenominational.

Resources. Notwithstanding the existence of large areas of arable land, the Nova Scotians depend most largely upon the mines and fisheries. About two-fifths of the land is used for tillage or pasture. The principal crops are wheat, oats, and various fruits. Dairying and cattle-raising are extensively followed. The fisheries include cod, mackerel, lobsters, herring, and haddock, and employ a large number of boats and men during the fishing season.

The coal areas of Nova Scotia cover about 700 square miles. The Cape Breton deposits are the most productive in Canada, and are

HARBOR OF SYDNEY, NOVA SCOTIA

The chief town of Cape Breton Island has one of the best harbors on the Canadian coast and is one of the few ports that have regular boat service to the Newfoundland capital. The place has a special importance also because of the extensive coal mines near it, whose workings reach far out under the waters of the harbor, but at such a great depth as to be safe. Naturally the city is a coaling port of great value to the commerce of the Canadian coast.

especially valuable on account of their nearness to the sea. Gold has long been mined profitably, and iron ore of excellent quality is found. The Province supplies more than half the gypsum produced in Canada. Lumbering is less important than formerly.

Chief Cities. Halifax, the capital and chief city of Nova Scotia, has been for more than a century, because of its excellent harbor, the principal British fortress in America. The fisheries and shipping industries generally insure a large trade. Chief among the exports are whale and seal oil, dried fish, furs, agricultural and dairy products, cattle, hides, and timber.

Situated in the eastern part of the island, Sydney possesses a magnificent deep-water harbor open throughout the year. The city is the center of a rich coal-mining district. Yarmouth, at the southwestern extremity of Nova Scotia, with a harbor surpassed by many others on the peninsula, nevertheless ranks fourth among the shipowning cities of Canada. Lunenburg, on the southeastern coast west of Halifax, is dependent for its prosperity on the Banks fisheries. Truro, at the head of Cobequid Bay, and Amherst, at the head of Chignecto Bay, are centers of rich agricultural districts. Windsor, a small town on the Avon, is the seat of King's College, the oldest English college in Canada. New Glasgow is the center of the Pictou coal mining district, and has grown rapidly in consequence.

HARBOR OF ST. JOHN, NEW BRUNSWICK

The only harbor north of Baltimore that is never obstructed by ice is that of St. John, and it is often a place of refuge for vessels in the winter months. The main part of the city, well-built and substantial but not impressive, lies on the east side of the harbor. DeMonts and Champlain, when exploring the coast in 1604, found themselves on St. John's day in this commodious haven, and to their piety the present city owes the name that it now bears.

PRINCE EDWARD ISLAND

Prince Edward Island has an area of 2,184 square miles. The Lieutenant-Governor is assisted by an Executive Council of nine members. The Legislature has but a single chamber with twenty-nine members. The Province is represented in the Dominion Parliament by four Senators and four members of the House of Commons. The schools of Prince Edward Island are free and undenominational.

Industries and Cities. Almost the entire island is under cultivation. The staple crops are hay, potatoes, turnips, oats, and wheat, to the raising of which the soil is peculiarly adapted, but rye, barley, maize, buckwheat, peas, and beans are grown also. The conditions of the island are especially favorable to the live-stock industry, and large numbers of cattle and horses are raised, particular attention being given to fine breeds. Dairy farming is a profitable and growing industry, while the factory manufacture of butter and cheese is rapidly assuming important proportions. The principal catch consists of lobsters, herring, cod, hake, sardines, and mackerel.

Charlottetown, the capital and largest city, is the center of distribution and supply for the eastern two-thirds of the island. The city has several woolen-mills, but its prosperity is due chiefly to an active trade in farm products and fish.

THE FALLS OF THE ST. JOHN RIVER, NEW BRUNSWICK

Where the River St. John empties into an arm of the Bay of Fundy it passes over a fall of rocks fifteen feet in height. This spot is the scene of a remarkable natural phenomenon, for when the Fundy tide rises with its height of twenty-five feet not only do the falls disappear but the inrush of waters gives the appearance of rapids turned in an upstream direction. A humorist long ago gave the spot the nickname of "the reversible falls," and so apt was the phrase that it has never been forgotten. It is a pretty sight to view the gorge from the hill on the southwest side. The long span of the suspension bridge is seen, paralleled by the railroad bridge at the left. In the distance, the city of St. John faces the broad arm of the bay.

MANITOBA

MANITOBA, the first Province of the Dominion of Canada to be carved out of the northwestern territory acquired in 1869 from the Hudson Bay Company, comprises an almost square area, measuring 282 miles from east to west and 264 miles from north to south, and having an extent, exclusive of water surface, of 64,327 square miles—a land area somewhat smaller than that of the State of North Dakota. All provincial boundaries of Manitoba are arbitrary.

The Province is governed by a Lieutenant-Governor, an Executive Council consisting of five members, each of whom holds a portfolio, and a Legislature comprising a single chamber with forty members. The Province has four Senators in the upper house of the Dominion Parliament and seven members in the House of Commons. Education in Manitoba is in the hands of a Council of Public Instruction, the income from certain public lands being applied to the support of the schools. Religious instruction is permitted in schools at certain hours of each day, but attendance at religious exercises is not compulsory. The educational system of Manitoba includes a normal school at Winnipeg.

MANITOBA PARLIAMENT BUILDING, WINNIPEG

One of the least pretentious, although the most important, of the buildings in the Manitoba capital is that from which the work of the provincial government is carried on. It is an extended edifice with a mansard roof whose line is broken in the center by a low tower. The visitor cannot but be struck by the absence of strong architectural effects and of unnecessary ornament. It is frankly the business headquarters of a busy administration and untouched by any affectation of pomp.

The Prairie Steppes. Manitoba forms a part of the great interior or elevated plain of Canada, and its natural divisions with respect to elevation lie in the same direction as the two great lake systems of the Province, from southeast to northwest. East of Lake Winnipeg is the Laurentian Plateau, extending throughout Southeastern Manitoba in a wedge-shaped area to the Lake of the Woods. Between the edge of this plateau and the Manitoba escarpment is included the First Prairie Steppe. The escarpment, known, successively, as the Riding Mountains, Duck Mountains, and Porcupine and Pasquia hills, rises from 800 to 1,400 feet above the plain and marks the beginning of the Second Prairie Steppe, in which is included the southwestern part of Manitoba.

The First Prairie Steppe occupies part of the basin of an ancient lake, named by geologists Lake Agassiz, which formerly covered an area of 110,000 square miles and included the basins of the Red River and the Lake of the Woods, Lakes Winnipeg, Manitoba, Winnipegosis, and Dauphin, with many smaller ones. Gradually receding, Lake Agassiz left a line of terraces marking off its successive levels. Where it crosses the international boundary from Minnesota, the First Prairie Steppe is about fifty-two miles wide, and it broadens at the north to 250 miles. The Second Prairie Steppe has for its eastern boundary line the Manitoba escarpment. The average elevation of this plain is 1,600 feet. Though the soil here lacks the remarkable fertility of that of the Red River lands, much of it is adapted to grain-growing.

Rivers and Lakes. All of Manitoba belongs to the Hudson Bay ainage system, and practically all of the drainage of the Province reaches the sea by the subsidiary Lake Winnipeg system. For this drainage the great lakes of the Province, with an area of about 10,000

FALL PLOWING AND THRESHING ON A MANITOBA WHEAT FARM

No scene is more typical of the life of the Canadian West than that in the wheat fields. In the fall, when the reaping has been done, the bare, stubble-covered prairie is broken for the next season's crop by gangs of plowmen moving slowly, one team following another, across the wide spaces of arable land. Meanwhile the threshing goes on. The wheat sheaves, brought on wagons from the field, are pitched into the great hopper of the buzzing thresher, from which flow two streams, one of wheat grains that passes into waiting wagons, and another of broken straw that is belched forth into the air from an upraised funnel, falling some distance away and building up great straw heaps that surround the gang of threshers.

square miles, are reservoirs. The drainage of the extreme southeast reaches Hudson Bay by way of the Lake of the Woods and its outlet, the Winnipeg River. Southern and Western Manitoba are drained by the Red River of the North and by the Assiniboine, its principal affluent. The Red River of the North, which has its source in Minnesota, is navigable from Fargo, North Dakota, to Winnipeg, but north of that point the St. Andrews Rapids are a bar to vessels. Depth of channel is characteristic of all the rivers of the Interior Plain, for, though the slope of the land is gentle, erosion of the soft materials of the plain is easy, and the valleys these streams have cut range in depth from thirty to several hundred feet.

Lake Winnipeg is 260 miles long and varies in width from two to sixty miles. Its area is 9,400 square miles; its depth, from seven to fifteen fathoms. In this reservoir is collected, and by Nelson River, its outlet to Hudson Bay, is discharged, all the drainage gathered by the rivers of the Interior Plain. Lake Manitoba, 810 feet above the sea, 122 miles long and from five to twenty-four miles wide, with an area of 1,850 square miles, has its outlet into Lake Winnipeg by way of Dauphin River and St. Martins Lake. Lake Winnipegosis has an area of 2,080 square miles.

GATEWAY OF OLD FORT GARRY

Climate. The climate of Manitoba is continental, but the extremes of heat and cold are ameliorated in their effect on animal life by the dryness of the air. Humid heat and raw cold are alike unknown. The mean January temperature at Winnipeg is 2.9°, and the mean July temperature is 65° with a mean annual temperature of 32°. Because of the lower elevation toward the north, temperatures do not vary in exact accordance with latitude. The dry fall weather, before snow flies, cures the standing grass, on which ranging cattle feed throughout the winter. Seeding usually begins the first week in April, before the frost is fully out of the ground, and the summer is of ample length to bring to maturity the staple crops of the Province.

Resources and Industries. The true forest extends into Northwestern Manitoba as far as the Duck Mountains only, the remainder of the Province being practically treeless except on the hills and in valleys. The timbered areas, being pine, spruce, birch, and tamarack, will be of commercial importance in the future, but are now eclipsed by the more accessible forests of Ontario. The deposits of clay and silt left by the receding Lake Agassiz, overlaid by from two to four feet of black vegetable mold, are the fertile wheat lands of Central Manitoba. The whole prairie steppe contains about 6,900 square miles, and one-half of its area, the southern and more elevated section, comprises one of the richest farming lands in the world. The soil is a rich, deep loam resting on a deep clay subsoil. It is well adapted to wheat-growing. In 1902 when the harvest was exceptionally good, the yield of the Province averaged 26 bushels to the acre. Cattle-raising and dairying are rapidly extending among farmers, and export products are increasing.

The mineral areas are limited to about 15,000 square miles. Coal is the principal mineral worked in Manitoba. For the most part this is a lignite of high quality, but in the western part of the Province true bituminous coal is found, and on the eastern slopes of the mountains there are beds of anthracite. There are deposits of iron in the Province, but these have never been worked; and gold has been found along the Saskatchewan, but not in sufficient amount to pay for labor of mining.

MIGRATING TO THE WHEAT LANDS

Long caravans of covered wagons, their white canopied tops standing out against the green plain, are common sights in the unsettled districts of the Canadian West, significant hints of the influx of population from older communities.

Commerce and Cities. All the industries of Manitoba, apart from agriculture, are subsidiary to that principal employment. The commerce of the Province consists chiefly in the marketing of its grain. The extension of railways has gone hand in hand with the development of the agricultural areas. In 1901 a new era in the railway history

WINNIPEG AND THE RED RIVER

The water front of Winnipeg is not handsome. The river banks are of but moderate height and the ground on either side of the stream is level prairie. The best view of this portion of the city is that from the Northern Pacific Railway depot, looking northward over the roof of St. Marys Academy which occupies the foreground of the scene. The main portion of the city lies away at the left, while directly in front are the sites of future factories, near the railway tracks and the river's edge.

WINNIPEG CITY HALL
Standing in the center of the city, with open streets about it and the tall shaft of the Soldiers' Monument close by, the City Hall of the Manitoban metropolis possesses a strikingly artistic effect.

of Manitoba was inaugurated, the Provincial Government then leasing for 999 years, with privilege of purchase, all the lines of the Northern Pacific Railway of the United States within the Province and later transferring its lease and options to the control of the Canadian Northern Railway.

Winnipeg, the seat of the government and chief city of the Province, is the commercial and educational center of Manitoba and the Canadian Northwest and the center of export for the granary of Canada. The city is the seat of the University of Manitoba, with which other educational institutions of the capital are affiliated. Brandon, the second city in size and importance in the Province, in the center of the wheat belt, is a thriving grain market. Portage la Prairie is an important grain market, milling town, and railway junction point. West Selkirk is a farming center.

ELEVATORS AT DELORAINE, USED FOR WHEAT SHIPMENT
The greatness of Manitoba as a wheat-growing region is indicated by the number of elevators that tower above other structures in the little towns along the line of the transcontinental railway. Here is stored the outflowing product that goes to feed the populations of the Old World. Climatic conditions in Manitoba are singularly favorable to wheat culture. The settlements that have sprung up in the fertile areas base their prosperity upon the profits of the wheat-fields, and the symbol of their hopes is the unlovely but significant form of the elevator.

Historical. What is now the most densely populated portion of Manitoba was, during the second and third quarters of the 19th century, the Red River Settlement of the Hudson Bay Company. The original charter of this trading company was granted in 1670. About 1783 a number of Montreal merchants, interested in the independent fur trade, united to form the Northwest Company, and the commercial struggle with the Hudson Bay Company in time assumed the proportions of a private war. A crisis was approaching when the Earl of Selkirk purchased a controlling interest in the Hudson Bay Company and bought from that corporation an immense tract of land, which he called Assiniboia, stretching from the Qu'Appelle and Assiniboine rivers on the west to Lake Winnipeg and Lake of the Woods on the east. Lord Selkirk sent out colonists in 1812–13, and bloody strife followed around the fortified trading posts in the Manitoba region until, in 1821, the two companies, nearly bankrupt through warfare, united, and the Red River Colony came under the rule of the Council of Assiniboia. The fur trade then was continued peacefully.

As early as 1858 the Canadian Government protested to the British Government against a continuance of the territorial privileges of the Hudson Bay Company. After some years of discussion and negotiation, the British Parliament passed an act providing for the admission of the territory in question into the Dominion, and the transfer of the Company's rights. Under this pressure, therefore, the Company in 1869 surrendered its claims to the home government. The Dominion Government sent out surveyors, and the Red River settlers, especially the French half-breeds, immediately became suspicious that their interests were likely to suffer by incorporation in the Confederation. A rebellion followed, led by Louis Riel, a French half-breed. Fort Garry, on the site of the present city of Winnipeg, was seized, and a provisional government was proclaimed, with Riel as president. An expedition under Col. Garnet Wolseley was sent out and Riel fled to the United States. In the meantime, in 1870, Manitoba had been admitted as a Province, and immigrants began to seek out the new land. The export of wheat from the Province began in 1877.

SCENE ON THE WHITE MUD RIVER
The White Mud River, one of the streams that drain the district south of Manitoba Lake, is a pretty prairie watercourse. Flowing gently, through level or undulating country, it seldom attains force and its volume fluctuates with the seasons, but its many windings and its broken masses of light forest produce some beautiful effects.

Louis Riel returned to the Province, and in 1885 led a new rebellion, which was promptly quelled by military force and Riel was hanged as a traitor. This year the transcontinental railway was completed to the Pacific coast and Manitoba acquired close commercial relations with the Atlantic and Pacific seaports. The most significant event after this opening of new opportunities was the purchase and lease of railroads by the provincial government in 1901, by which the Province secured the power of controlling freight rates in the interests of the shippers.

BRITISH COLUMBIA

BRITISH COLUMBIA, the division of Canada touching the Pacific Coast, is the largest Province in the Dominion, having an area of 370,191 square miles of land surface and 2,439 square miles of water surface. It lies almost entirely between the Rocky Mountains and the Pacific Ocean, just north of the line of the international boundary. The Province is bounded on the north by Yukon Territory and the District of Mackenzie and on the east by Athabaska and Alberta districts. Its greatest length, from southeast to northwest, is 1,250 miles. The length of its wonderful coastline, including indentations, measures about 12,000 miles.

British Columbia entered the Canadian Confederation in 1871 under an agreement providing that a railway communicating with the East be assured by the Federal Government, and this agreement was fulfilled by the opening of a railroad in 1887. The Province is governed by a Lieutenant-Governor, appointed by the Governor-General of the Dominion, who is assisted by an Executive Council of five members. The Legislature consists of a single chamber of thirty-eight members. Schools in the Province are free and undenominational.

Coast and Mountains. The distinctive physical features of British Columbia are its serrated sea-coast and its mountains. Along the coast, indented by numerous estuaries, are many small islands and three large ones, Graham and Moresby islands, the largest of the Queen Charlotte group, and Vancouver Island. The general height of the mountains of Vancouver Island is between 2,000 and 3,000 feet. The island is 270 miles long, with an area of 16,000 square miles. All the islands of the British Columbian archipelago are heavily wooded, and rugged elevations front on the deep-water channels that wind among them. The mountains of the Queen Charlotte group reach an elevation of 5,000 feet. These islands are semi-submerged mountains forming the outer fringe of the Cordilleran belt. The Cordillera is about 400 miles wide and is bordered on the east and on the west by mountain ranges of far greater height than the intervening country, which, although it is furrowed by rivers and ridged by stupendous earth movements, is known as the Interior Plateau. Its western rim is the comparatively low Coast Range that lies west of the Cascade Mountains. The sea has partly submerged the foot-hills that otherwise would soften the rugged coast-line of the country, changing the intervening valleys into deep sounds, straits, and channels, and it has encroached, also, upon the rivers at their mouths, making broad, fiord-like estuaries.

PARLIAMENT HOUSE AT VICTORIA

On Belcher Avenue, between the business district and the wharves, is a group of public buildings surrounded by extensive lawns and facing a space where stands the statue of the first Governor of British Columbia. The central edifice of the group is the Parliament House. On one side stands the Provincial Museum and on the other the Government Offices. Their handsome stone façades, above which rises the great rounded dome of the Parliament Building, have a striking and harmonious effect.

The eastern rim of the Cordillera is formed by the Rocky Mountains, which, entering from the United States on the south, pass throughout the entire length of British Columbia. At the international boundary the Rocky Mountains have a width of about sixty miles and an average height of about 8,000 feet, but farther north they decrease in width and in height. West of the Rocky Mountains in Southeastern British Columbia are the Purcell mountain chain, the Selkirks, and also the Gold Range, of which the last named borders on the Interior Plateau and stretches farther north, expanding into the Cariboo Mountains.

River Systems. The drainage from the mountains of British Columbia into the many valleys between the ranges has developed several fine river systems. All of Southern British Columbia may be said to be divided into two great drainage basins, of which the eastern feeds the

THE GREAT GLACIER OF THE SELKIRK MOUNTAINS

One of the most striking scenes of wild grandeur in all the great extent of the Rocky Mountain system is that where the Great Glacier of the Selkirks slowly moves its icy mass from far up the mountain valleys toward the lower levels. Its wide expanse is covered over by snow fields whose limits on either side are traced abruptly where the living ice-stream forces itself with mighty strength against the forested slopes and precipitous walls of gray rock that hem it in.

MOUNT STEPHEN AND FIELD VILLAGE

The line of the transcontinental railway across the Rocky Mountains, after passing the crest of the system, drops down through the length of the Kicking Horse Gorge by trestles and tunnels until it emerges valleyward upon a long, narrow flat where the little village of Field lies like a toy town hemmed in between the gigantic bulks of Mount Stephen on the one side and Mount Field on the other.

Columbia River, while the western has the Fraser River for its main artery. The southern part of the valley at the base of the Rocky Mountains is occupied by the Kootenay River, flowing south, and the Columbia River, flowing north, only separated by the narrow ridge of the Crisco and Stanford ranges. The Columbia, following the valley northwestward, sweeps around the northern end of the Selkirks and then, with an irregular course southward, flows through the valley between the Selkirks and the Gold Range, receiving the Kootenay and passing on into the United States.

The Fraser River rises in the western slopes of the Rocky Mountains, flows at first northwest, skirting the great Arctic-Pacific divide, and then turns southward at an angle of forty-five degrees to its former direction. On both sides of the Cariboo Mountains, which are inclosed within its great bend, the Fraser receives tributaries that have their sources in these lofty highlands. Its principal affluent on the east is the Thompson River. The Fraser is 750 miles long, but it is only navigable for a distance of eighty miles from its mouth.

The northern portion of British Columbia, a country of rough plateaus and mountains, is watered on the west by the Stikine and Skeena rivers, by the tributaries of the Liard River in the northeast, and by the streams that drain the northern valleys of the Cariboo Mountains into the Peace River basin.

Climate. The coast everywhere enjoys a climate ameliorated by the influence of the Japan Current. As the western slopes of the mountains receive the first precipitation of the moisture borne by the prevailing westerly winds, the coast has a rainfall everywhere abundant and in some localities excessive. Between the Coast Range and the Gold Mountains are arid plains that will not yield fair crops without irrigation. On the Interior Plateau the winter temperature frequently falls below zero, but the dryness of the air makes the cold endurable even in the far northern regions. The westerly winds, deprived of their moisture, descend upon the plains of the Northwest Territories dry and capable of absorbing, rather than precipitating, moisture. They are known as the chinook winds, and form one of the chief determining factors of the climate that is characteristic of those Territories.

THE FRASER CANYON

In the narrow canyon of the Fraser River the persistence of man has built a railway that runs mile after mile along the edge of a dizzy precipice. Far below it rolls the river, swift, silent, and green with depth, while above it tower threateningly great cliffs on which struggling mountain shrubs here and there find a scant foothold.

BRIDGE ON CARIBOO ROAD, FRASER CANYON

Through the tortuous length of the Fraser Canyon extends an old wagon road once much used but now hardly more than a trail. It is called the Cariboo Road. After following the steepest part of the canyon it slopes steadily downward when the canyon walls begin to widen and at the little hamlet of Spuzzum crosses the river on a graceful suspension bridge whose single great span is a line of beauty standing out against the dark background of somber forest and mighty walls of rock.

Resources. Gold, silver, lead, copper, and coal are widely distributed and are at present the chief mineral products of British Columbia. Gold was first discovered in 1851 and alluvial gold has since been found in all the streams that drain the Selkirks and the mountains of the Gold Range. Recently there has been rapid development of the auriferous iron and copper pyrites lodes of the Kootenay Region. The largest coal-workings of British Columbia are chiefly on Vancouver Island, but in the Rocky Mountains around Crow's Nest Pass is an area rich in anthracite of excellent quality. In different parts of the Province there are lignite areas estimated at 12,000 square miles in extent. The coal resources of Vancouver Island, which are well developed, lie in two principal areas, the Nanaimo field and the Comox basin.

EMERALD LAKE

From the village of Field a wide wagon road through the thick spruce forest leads around the spurs of Mount Burgess to Emerald Lake, a gem of mountain scenery ensconced in a hollow with great peaks rising about it on all sides.

Second only to the mines in value among the natural resources of British Columbia are the fisheries, including the catch of hair and fur seal. The canning of salmon and fur-sealing are the leading branches of the industry, the catch of salmon, which in the summer months ascend the rivers from the sea, being by far the more important item. Canneries are established on the coast, along the Fraser River, and along the Nass, Skeena, and other smaller rivers. Sturgeon, halibut, and cod are taken also.

Although the oak is found in Vancouver Island, the broad-leaf maple in the region approaching the mouth of the Fraser River, and the aspen throughout the whole of British Columbia, the forests that constitute so rich a resource of the Province are almost entirely of conifers.

ROADWAY, STANLEY PARK, VANCOUVER

The city of Vancouver lies on a long, narrow, ridge-shaped peninsula between two inlets. At the peninsula's point is Stanley Park, one of the most beautiful pleasure grounds in the world. It is a remnant of primeval forest that remains largely in its original condition. Roads and pathways have been constructed in every direction, however, and these converge at points that overlook the deep waters of the bay, where ocean vessels continually pass and repass.

DRY DOCK AT ESQUIMALT

Four miles from the city of Victoria is the harbor and naval station of Esquimalt, the headquarters of the British Pacific squadron. Here is a dry dock 430 feet long and 26 feet deep, for repair of battleships. This makes Victoria an important strategic point, since, in any war involving operations on Pacific waters, it would be a valuable naval base.

The Douglas fir, known to commerce as the Oregon pine, predominates, attaining a large growth almost everywhere. Yet larger and taller are the cedars. Hemlock and cypress occur in great quantities.

Chief Cities. Victoria, the capital and chief seaport of British Columbia and the second seaport of the Dominion, is headquarters of the Canadian fur-sealing fleet, and its ocean trade is large. Near it is Esquimalt, a fine land-locked harbor, strongly fortified. Vancouver, the largest city of the Province, situated on Burrard Inlet, one of the best deep-water harbors on the Pacific Coast, ranks next in importance to Victoria as a seaport. New Westminster has large and increasing salmon-canning and lumber-working interests. Nanaimo is an important coal-mining town. Kamloops, at the confluence of the North and South Thompson rivers, is the center of supply for a large mining and grazing district. Rossland, in the southeastern part of the district of Yale, is a thriving mining town, the center of the West Kootenay mineral region. Most of the ore is smelted at Trail on the Columbia River to the east, where are located the largest smelting works in Canada. Nelson, twenty-two miles from the mouth of the west arm of Kootenay Lake, is the port of entry for the Kootenay Region and the center of gold and silver mining and smelting.

THE TERRITORIES

THE TERRITORIES is a general term indicating the sparsely settled regions of the Dominion of Canada that are not included within the limits of the seven Provinces and which constitute nine distinct political areas, four of them under provisional government and five without civil organization. Assiniboia, Alberta, and Saskatchewan, with the unorganized District of Athabaska, form one administrative unity termed the Northwest Territories. The Yukon Territory forms another administrative unity. The unorganized District of Keewatin is attached to Manitoba, while the Districts of Mackenzie, Ungava, and Franklin, practically uninhabited by civilized people, await regulation.

THE THREE SISTERS, CANMORE, ALBERTA

Near the small mining settlement of Canmore are three great peaks conspicuously separate from other mountain groups of the region. Their broken and castellated heights, seamed by titanic convulsions of nature, bear great fields of snow whose elevation makes them perpetual. The traveler who crosses the mountain crest by way of Bow River Gap, the eastern gateway of the Rockies, cannot but be impressed by the weird beauty of these three silent sentinels of the mountain pass.

The government of the Northwest Territories consists of a Lieutenant-Governor resident at Regina, with whom is associated a Legislative Assembly of thirty-five members. Two Senators and ten Representatives represent the Districts in the Dominion Parliament. The three organized Districts have an area of 298,380 square miles. The Yukon Territory is governed by a Commissioner assisted by an Executive Council of ten members, while one Representative has a seat in the Dominion Parliament. The area is 196,976 square miles.

Surface and Climate. The Northwest Territories, including Athabaska, fall into three divisions, the Laurentian Plateau, the Interior Plain, and the Cordillera. The northeastern division of Athabaska and the small angle of Saskatchewan at the foot of Lake Winnipeg are included in the plateau. Western Alberta, containing the foot-hills of the Rocky Mountains, is a part of the Cordilleran region; the intervening belt of fertile though not always well-watered land is included in the great plain that stretches north through Western Mackenzie, reaching as far as the Arctic Ocean.

Yukon Territory lies wholly west of the Rocky Mountains, in the Cordilleran region. Yukon has a coast range at the north, fronting on the Arctic Ocean, but the territory as a whole has an estimated average level of only 2,000 feet above the sea. The District of Ungava, with its interior wilderness of the Barren Grounds, comprises all of the Labrador Peninsula north of Quebec and west of the coast strip belonging to Newfoundland. Keewatin, on the opposite shore of Hudson Bay, is a bleak and rugged country, almost everywhere sterile, but said to be rich in metals.

Remote from the influence of the ocean, the three Districts of the prairie steppe region have a climate of extremes, with a mean annual temperature ranging from 30° to 40°. The precipitation in the Northwest Territories, while sufficient for the growth of the native grasses, is in many places inadequate for cultivated crops of well-watered regions. Yukon Territory is a region of long, intensely cold winters and short summers. The Yukon River up to Cudahy frequently is closed to navigation from September until the middle of May.

MEDICINE HAT, FROM ACROSS THE SASKATCHEWAN

Medicine Hat, a typical prairie city of the Canadian West, spreads itself loosely over an ample town-site that edges the low bluffs of the South Saskatchewan River. Near it are valuable coal fields, and far under the fertile soil on which it rests has been found an unfailing store of natural gas. The town, though not large, is spacious. In its central part the wooden buildings are set compactly, but all around them the homes of townsmen are placed stragglingly. From the town's edge to the far horizon is the vast sweep of the rolling prairies, its undulating surface girdling the flat on which the city stands. Across the river's width a great steel bridge gives entrance to the railroad that links the prairie town with the busy life of the great Eastern cities.

HERD OF RANCH HORSES, MEADOW CREEK, ALBERTA

On the wide-spreading plains of Alberta, where the prairie extends mile after mile in swelling waves of fertile ground broken only by little water-courses or by gullies that fill when the heavy rains are falling, are ideal locations for stock-raising. Here are bred hardy animals for the farm and road. Growing in the free, untainted air of the prairie, fed by the nutritious wild grass that spreads itself over the rich soil, their endurance and strength contribute in no small degree to the resources of the territories.

Hydrography. The Mackenzie, next to the combined Mississippi and Missouri, is the largest river of North America. It is nearly 2,500 miles long and drains an area of 677,000 square miles. This river, first known as the Athabaska, then as Slave River, and finally as the Mackenzie, is navigable for 1,120 miles from the sea, being nowhere less than seven feet deep. Peace River, the most important tributary of the Mackenzie, 905 miles long, rises in British Columbia, where it is known as the Finlay. After a course of 310 miles southward it unites with the Parsnip River, and takes the name Peace River. Southeastern Athabaska is drained by the chain of waterways that constitute the Churchill River, to which Reindeer River, draining the lake of the same name, is tributary. Most of the drainage of the interior of Yukon Territory is gathered in streams that are tributary to the Yukon River, which, in the summer, is navigable for boats of shallow draft from Fort Selkirk to its mouth.

THE SUGAR LOAF, SOURIS COAL-FIELDS

Along the Souris River, in the extreme southeastern part of Assiniboia, are the valuable Souris lignite deposits, found in surface outcroppings of tilted seams. The Sugar Loaf is a rounded hill in which the lignite strata are exceptionally prominent and typical. At present these deposits are little exploited, but their presence assures future factory industries.

Hudson Bay is 590 miles from east to west and has a uniform depth of about 420 feet; its waters are clear and salt, and the tide on the western shore rises from eleven to fifteen feet. The bay does not freeze over in winter, nor does the strait connecting it with the Atlantic. Floating ice, however, constitutes a peril to navigation except during the two months from mid-July to mid-September. The best harbors are at Fort Churchill and at York Factory.

Resources. Eastern Assiniboia is a rich farming country, mostly true prairie, with wooded land here and there only. Western Assiniboia, being covered with buffalo-grass, is well adapted to ranching, but without irrigation is too dry for all the crops grown in Manitoba. The extreme southern part is an alkali region. Southern Alberta has no wooded tracts east of the mountains, but the surface of Northern Alberta is well watered and wooded. The face of the country is somewhat broken, and soil and climate favor the growing of all kinds of grain and root crops. Saskatchewan has many considerable streams, a rich soil, and a favorable climate, and well-wooded hills diversify the prairie configuration of the District.

The gold-fields of Yukon have sprung into prominence within recent years. Placer-mining is followed chiefly, but in the mountains there is an abundance of gold-bearing quartz. Coal in quantity has been discovered in the heart of the gold-fields. Considerable masses of manganiferous carbonate of iron exist on the eastern coast of Hudson Bay, and in the islands there is an abundance of copper. Silver-lead as well as copper ore is found in the valley of the Coppermine River. There are considerable deposits of mica, galena, and plumbago, while gypsum occurs along the Moose River, and lignite has been discovered on this stream and on the Abitibi River. The chief mineral production throughout the Territories is coal.

Cities and Trading Posts. Regina, the chief town of Assiniboia, is the capital of the Northwest Territories and headquarters for the Northwest Mounted Police. Calgary, at the confluence of the Elbow and Bow rivers, the chief city of the Northwest Territories, is a center of supply for an extensive mining region and the market for a large ranching area. Edmonton, in Northern Alberta, is important as a distributing point. Prince Albert and Battleford are the chief settlements of Saskatchewan.

The settlements of Athabaska and Mackenzie are clustered about the trading-posts of the Hudson Bay Company and the religious missions among the Indians. Fort Chippewyan is one of the most important of these mission stations. Dunvegan, on the upper Peace River, is another important trading and mission post. Dawson, the center of the gold-fields and capital of Yukon Territory, lies at the junction of the Klondike and Yukon rivers.

LAKE LOUISE, NEAR LAGGAN, ALBERTA

A winding road reaching through the forest from Laggan terminates at a pretty little mountain lake hemmed in by the massive bulks of peaks that loom above it. Its length is a mile and a half and its breadth a scant half-mile, but down into its clear, cold depths the plummet drops 600 feet before touching bottom. When seen from the hotel close by the glacier-clad Mount Victoria fills the background, at midday reflecting dazzlingly the sunlight from its great snow-fields.

NEWFOUNDLAND

NEWFOUNDLAND, an island colony of Great Britain, lies east of the Dominion of Canada, separated from the mainland by the Strait of Belle Isle and the Gulf of St. Lawrence, and having an area of 42,734 miles. The Labrador coast, since 1809 a dependency of Newfoundland, has an area of about 120,000 square miles. The government is administered by a Governor named by the Crown, and assisted by an Executive Council. A Legislative Council and House of Assembly form the law-making branch of the Colonial Parliament.

THE ESTUARY OF THE HUMBER, IN THE BAY OF ISLANDS

The great Bay of Islands, so called from the islets that stud its entrance, breaks the contour of Newfoundland's western shore into separate arms as it extends inland. The more southerly of these arms is Humber Sound, which receives the Humber River. South and east of the Sound rise the Blomidon Hills, pierced by the narrow gorge of the Humber River. At the head of the Sound, where the Newfoundland Railway makes a turn southward, nestles the little village, Bay of Islands.

Physical Features. The coast for the most part is bold and rocky. The interior, so far as it has been explored, is an undulating plateau. The slope of the country is toward the northeast, and in that general direction flow most of the larger rivers, except the Humber, discharging on the west coast. The Exploits River, the largest in Newfoundland, is 200 miles long. The Gander River, rising near the southern coast, discharges into an arm of Notre Dame Bay. Lakes and ponds abound, but the waters that connect them are navigable for canoes only. There are few peaks in the island of an elevation exceeding 2,000 feet. Southeast of the island lies the famous submarine plateau known as the Grand Banks, 600 miles long and 200 miles wide, with a depth of from 10 to 160 fathoms of water. The cod fisheries of the Grand Banks are the most extensive in the world.

The climate of Newfoundland is wholly tempered by oceanic influences, cool in summer and raw in winter. Owing to proximity to the meeting-point of the cold Labrador Current and the warm Gulf Stream, fogs prevail over the Grand Banks and along the coast of the island. The average minimum temperature on the coast is about 70° and the average maximum 83°. The timber along the southern and western shores is mostly stunted spruce and fir, but inland are thick and valuable forests.

Resources and History. Fishing is the main occupation of the inhabitants, and the products of this industry form the principal item in the commerce of the island, cod, seals, herring, and lobsters being the source of prosperity. Labrador contributes a large part of all the fishery products exported from the island. The chief agricultural products are hay, barley, and oats, with potatoes, turnips, and other root-crops. Deposits of iron ore are worked on Belle Isle, in Conception Bay, and near the western coast; coal is mined near St. George's Bay and in the Grand Lake district; and valuable copper mines furnish ore for export. The capital and principal city of the island is St. Johns, situated on the Atlantic shore of the peninsula of Avalon. Its magnificent landlocked harbor accommodates the largest ships. Harbour Grace and Carbonear are active fishing towns.

The first attempt at colonization in Newfoundland, under Sir Humphrey Gilbert, was doomed to failure. By the year 1615, however, when Capt. Richard Whitbourne was sent out to administer justice and establish order, a considerable colony had grown up, and the fishing industry was recognized by British merchants as a resource worth monopolizing. In that recognition began the troubles of the colony. Increase in population and development of agriculture were discouraged by the merchants interested in the fisheries. The settlers were at the mercy of the "fishing admirals," as the first skippers arriving at the various ports of the island in any season were called. Not until 1729 was there any real recognition by the British government of a settled population, and not until 1764 was the island recognized as a colony. Private ownership of land was permitted first in 1813. Representative government was conceded in 1832.

ST. PIERRE

The French islands of St. Pierre and Miquelon lie a short distance off the southern coast of Newfoundland, near the mouth of Fortune Bay. They have an area of ninety-three square miles. St. Pierre has an area of only ten square miles, but the population is centered chiefly on this island, which is the seat of the chief town, St. Pierre. Largely rocky and barren, with a climate of prevailing rains and fogs, the group owes what importance it possesses to proximity to the international fishing-grounds of the Grand Banks. Not only is it the headquarters for the French fishing fleet and a source of revenue to the home government, but, as a naval station, it constitutes a valuable strategic lever in the hands of France and has been a prominent factor in the diplomatic adjustment of her interests at the various points where they clash with those of Great Britain.

SCENE NEAR HOLYROOD, CONCEPTION BAY

Conception Bay, which divides the Avalon Peninsula on its northern side, is one of the most important of the harbors of Newfoundland. All along its shores are scattered little fishing settlements, notable for the natural beauty of their surroundings. Behind these the country rises into groups of rocky hills. Holyrood is one of the villages that lie along the railroad where it skirts the edge of the Bay.

THE UNITED STATES

THE UNITED STATES OF AMERICA, one of the largest in area and the richest in resources among the world powers, lies in a broad belt spanning the North American mainland from east to west. The federated States with contiguous Territories have a total area of 3,025,600 square miles, and the outlying North American Territories of Alaska and Porto Rico add 594,490 square miles to that figure. To this may be still further added about 500 square miles in Panama and 60 square miles in Cuba, held by the United States Government under special concessions.

THE PRESIDENT

Theodore Roosevelt, previously Governor of New York, became Vice-President in 1901, acceded to the presidency by succession in the same year, and was returned to office by the quadrennial election of 1904.

The Appalachian Region. The elevated Appalachian Highland extends from the St. Lawrence River in a curved southerly direction, to Alabama. In Pennsylvania the chief ridges of the Appalachian System are known as the Blue and the Allegheny mountains. Continuing south, the same system becomes the Cumberland and Great Smoky ranges, which extend through Virginia, Tennessee, North Carolina, South Carolina, and Georgia, until they are lost in the Coastal Plain of Alabama. Along the west side of the Appalachian Mountains runs the Great Valley, beyond which, toward the north, is the Allegheny Plateau, bordered on the east by the Alleghenies. Extending southwest to the southern Coastal Plain is the Cumberland Plateau, which on the northwest merges into the prairie lands of the valley of the Ohio River.

The land is flat in the Atlantic Coastal Plain from Long Island Sound south to St. Marys River, ascending slowly inland to the mountains. On the North Atlantic coast the sea is deep and the shore line indented with bays, making good and capacious harbors, but along the southern coast the water is shoal and good harbors are exceptional. In its western portion the Coastal Plain merges into the Piedmont Belt, a strip of rolling country, with steep slopes and rough hills.

The Mississippi Valley. The great interior region drained by the Mississippi and its tributaries is largely a country of plains or low, rolling plateaus, called the Great Central Plain. In this the Mississippi River has worn a channel over 600 miles in length. The States adjacent to the Mississippi on the west have many of the physical features belonging to other regions. Portions of Minnesota, Iowa, Missouri, South Dakota, Nebraska, and Kansas resemble the Western prairie States of the Ohio region. Most of the surface is treeless, very productive, and widely cultivated. South of the Missouri River the land rises gradually to the broad, flat dome of the Ozark Plateau.

A vast sub-arid region, extending from the trans-Mississippi tier of States to the base of the Rocky Mountains, embraces territory in which the annual rainfall is from ten to twenty inches, and in which irrigation is necessary. From the Missouri to the Rocky Mountains in Montana there is a large area of comparatively level plains, interrupted by occasional eminences. Forests cover these elevations, and the cultivated fields on the bottom lands produce good harvests, but most of the vast territory between the ranges is used only for grazing The Llano Estacado, or Staked Plains, in Northern Texas, is a dry and nearly treeless expanse of about 40,000 square miles.

The Cordilleran Highlands. The Great Plains are terminated abruptly on the west by the eastern range of the Rocky Mountains, which rises from a base of 4,000 to 6,000 feet to peaks of 10,000 and 14,000 feet. Other ranges lie farther west. Passing from the Great Plains to the Rocky Mountains, the pastoral industries of the one region give place to the mining industries of the other, although there are limited areas among the mountains in which ranchmen and farmers find it profitable to follow their pursuits. South of the Uinta Range, in Utah, New Mexico, and Arizona, is the Colorado Plateau, an extensive region of great altitude. The Colorado River and its tributaries traverse the territory in deep gorges or canyons. Evidences of volcanic action are unmistakable; fractures divide the country into blocks ten or twenty miles in width, and lofty cones and extensive lava beds are frequent. The highest plateaus receive sufficient rainfall to maintain forests, but the lower uplands are barren deserts. In the northwest a great extent of country, built up of vast lava sheets, comprises the Columbia Plateau. In Oregon, Washington, and Idaho it is drained by the Columbia and Snake rivers. The territory south of the Columbia Plateau, called the Basin Range Area, falls within the arid region and is diversified by many independent mountain ranges. It contains the Great Salt Lake.

ROCKY SEA-COAST IN NEW ENGLAND

The greatly extended shore line of the Atlantic side of the United States varies in character as it reaches from north to south. Throughout the greater part of its length the typical features are low, sandy, or swampy beaches. In its northern portion, however, its character is otherwise. Here the country near the ocean, broken and rugged, the sea dashing against high, rocky cliffs and headlands with precipitous fronts, abounds in scenery that is famous for its picturesque beauty.

The Pacific Slope. The Coast Ranges on the Pacific Slope are broadly separated from the Rocky Mountains, and include the Sierra Nevada of California, the Cascade Mountains of Oregon and Washington, and several smaller cordilleras. In the north the Columbia River is the great outlet of drainage. In the south the principal streams are the Sacramento and San Joaquin. The Sierra is precipitous on the east, but the descent on the west is more gradual. The eastern slope of the Sierra is less rich than the western in deposits of precious metals, the chain upon its western slope being rich in gold and silver. The broad depression between the Coast Range and the higher mountains farther inland makes plains of great extent, of which the largest and most productive are in California. In the far Northwest, the expansive forests on the littoral slopes of Oregon and Washington form the basis of a growing export trade, and exports of wheat are

large. In every way these States are making phenomenal progress in the increase of products of their fields, forests, and mines. In Washington the great inlet of Puget Sound affords a shelter for ocean commerce, but, generally speaking, in their paucity of well-protected harbors the Pacific Coast States form a striking contrast to the States of the Atlantic seaboard.

THE PRAIRIE SCENERY OF THE GREAT PLAINS

The great prairie areas, vast in their extent and pronounced in feature, must be reckoned among the principal types of continental scenery. These immense grass-covered plains sweep from horizon to horizon like a great ocean, the resemblance to which is often increased by an undulating surface. The prairie country, the monotony of its wide outlook often broken by broad undulations and by the channels of streams, possesses a beauty and charm wholly its own.

Climate. The greatest climatic contrasts in North America are those found between the maritime and interior regions but they are modified in the central and eastern portions of the United States by the oceanic influence of the Gulf of Mexico and the equatorial currents flowing north along the Atlantic coast. The widest range of temperature, with extreme winter cold, is found in the elevated regions lying just east of the northern Rockies. Frequent oscillations of temperature mark the climate of the eastern and central parts of the country. These are due to the creation of storm centers on the eastern slope of the Rockies, which, moving across the country eastward, are followed by anti-cyclonic areas of differing temperature. The country east of the Mississippi is well watered by rainfall. Westward of that river the rainfall decreases, but the only permanently arid regions of North America are in the high plateaus of the west, where considerable areas are absolutely cut off from the moisture-laden winds of the Pacific by the ranges of the Western Cordillera, and the Arctic and sub-Arctic tracts of the British dominions. Over a large extent of country in the western interior the effects of a scanty rainfall are overcome by irrigation. While the intermontane basins and the eastern slopes are dry, the western slopes have a plentiful rainfall. The regions of scant rainfall sometimes afford excellent grazing lands.

Industries and Commerce. Agriculture is the dominant industry of the people of the United States. Corn, sugar-cane, hay, tobacco, cotton, wheat, and oats are the staple crops. Stock-raising is carried on all over the country, but especially in interior States of the Mississippi Valley region. Dairying is fully developed.

Supplementing the work of the husbandman of the United States is the labor of the miner. The variety of products of the mining industries is equaled by no other nation in the world. Anthracite and bituminous coal, natural gas, and petroleum furnish fuel for domestic and industrial uses; iron supplies the demand for materials for everything into which iron and steel enter; copper and aluminum furnish materials used in various mechanical arts; while lead, zinc, nickel, and quicksilver are found in ample quantities. Hence it is that as a manufacturing people the Americans occupy the most important position among the nations of the earth.

Railroads reaching every section are the avenues of a vast interstate trade and of an immense system of interchange with other countries. Giant cities have sprung up at interior points and at harbors used for foreign commerce.

Government. The Government of the United States is that of a federated republic, composed of forty-five States, which are sovereign in all those powers not delegated to the General Government and which are not necessary for the perpetuation of national and united existence. The organic law of the federation is the Constitution of the United States. The Government is divided into three separate departments—the Executive, the Legislative, and the Judicial—represented by the President, the Congress, and the Supreme Court respectively. The heads of the executive department form an advisory body for the President, called the Cabinet. Congress is composed of two houses — the Senate and House of Representatives. The Supreme Court decides upon the constitutionality of national laws and is the tribunal of final resort in certain cases.

THE GREAT CANYON OF THE COLORADO

The broad rainless areas of the Rocky Mountain plateau have their own peculiar type of scenery marked by harsh outlines, varied colors, and a titanic grandeur of scale. Here occur those gigantic river gorges the beauty of which depends so much upon the element of immensity that no camera has ever been able to reproduce more than a small part of their wonderful charm.

Historical. The Atlantic coast was found by Spaniards in 1512 and settled in 1565 in Florida. In 1578 the English government assumed dominion on the upper part of the coast, making permanent settlement in 1607 and later. Dutch and Swedish settlements passed to English ownership by 1664, leaving the English and Spaniards masters of the seaboard. In the 18th century the French acquired the Mississippi Valley, but war forced them to surrender it in 1763. Great Britain now held a magnificent American empire but governed it unwisely. Rebellion followed. In 1776 the new republic of the United States of America appeared and wrested independence from the motherland. The republic in turn placed its grasp on continental power. In 1803 Jefferson purchased from France the great region west of the Mississippi. In 1821 Spain was urged into parting with Florida. The revolted Mexican State of Texas was admitted to the Union in 1844, bringing on a war which forced Mexico to cede California and intervening territory in 1848. Oregon was acquired in 1846. Later years brought outlying possessions. Alaska was bought from Russia in 1867, and Porto Rico was won from Spain in 1898 by war. In 1903 Cuba ceded naval stations on its coast, and in 1904 Panama ceded the Canal Zone.

NEW ENGLAND

NEW ENGLAND is a geographical term applied to the group of six States that occupies the extreme northeastern section of the American Union. In the early days of colonization these areas formed a political unity, and their persistent likeness in social character has caused the survival of the descriptive term under which they are now grouped. Their areas aggregate 66,465 square miles, of which 4,492 square miles are water surface. About one-quarter of the people are of foreign birth.

Mountains. The northern portion of the Appalachian System extends across New England in broken ranges and groups which seldom attain any great height. The highest portion of these mountain areas is the White Mountain group, in New Hampshire, which reaches, in Mount Washington, 6,293 feet. This group, subdivided into the Presidential Range and the Franconia Mountains, is famous for its quiet beauty. From the White Mountains a broad plateau extends northeasterly, developing into low ranges which penetrate Maine as far as the headwaters of the Aroostook River, where they culminate in Mount Katahdin, 5,200 feet high, from thence continuing east as broken hills as far as the Canadian border. In Vermont is the double range of the Green Mountains, which lies roughly parallel to the ridges of New Hampshire and Maine. The highest peak of Vermont is Mount Mansfield, with 4,364 feet elevation. Northward these ranges extend into Canada. To the southward they reach into Massachusetts, taking the names of Taconic and Hoosac mountains. Still farther south they become extended ridges of broken hills in Connecticut.

MOUNTAIN SCENERY OF MAINE

The Appalachian mountain system, in contrast to the Rocky Mountain cordillera, shows from a distance a billowy outline composed of low crests, gradually swelling slopes, and wide valleys.

CHARACTERISTIC RIVER SCENERY OF NEW ENGLAND, IN COOS COUNTY, NEW HAMPSHIRE

In New England the nearness of the Appalachians to the coast prevents the existence of great lowland plains between mountains and sea, and gives the rivers a short and rapid course to the ocean, broken in many places by cataracts and rifts. Along the banks of these rivers, where settlement has not caused the land to be cleared, exist wide stretches of thick forest, growing on rough and rocky soil.

Hydrography. New England belongs almost entirely to the eastern slope of the Appalachians, the exception being a portion of Vermont, which drains westward into Lake Champlain and through it to the St. Lawrence River. The general trend of the rivers is north and south. Chief among the streams is the Connecticut River, which forms the boundary between New Hampshire and Vermont, traverses Massachusetts and Connecticut, and is navigable for steamers as far as Hartford. In Maine are the Penobscot and Kennebec, the former navigable as far as Bangor and the latter to the city of Hallowell. On the eastern border of Maine is also the St. Croix, which admits vessels some distance. A large number of the smaller streams have great industrial importance because of the water-power afforded at the rapids and falls in their courses. Of these the Merrimac River, formed in New Hampshire and crossing a part of Massachusetts, is the most important. Its lower course is lined with manufacturing cities, and it is said to turn more mill machinery than any other river in the world. The Androscoggin River and the Saco River, both of which are in Maine, also are notable for water-power.

Climate, Flora, and Fauna. The climate of New England is severe in the colder portion of the year, and at all times subject to abrupt changes. In the summer the prevailing winds are from the southwest, tending to accentuate the heat, while in the winter the winds blow from the northwest, increasing the coldness of the season. Precipitation is quite evenly distributed in all the States, with a small advantage as to volume in the coast and mountain districts.

The great timber belt which sweeps across Canada extends over much of New England. Pines are the characteristic trees, from which fact Maine is called the "Pine Tree State." There are large quantities also of spruce, hemlock, fir, cedar, and larch toward the north, with oak, maple, birch, ash, beech, cherry, elm, and poplar in the more southern parts. The plum and grape are native to the country.

The elk, caribou, and deer abound in the woods of Maine, as well as bears, wolves, and wildcats. Deer are also found on Cape Cod and bears in Vermont. Smaller creatures, such as the fox, raccoon, woodchuck, and rabbit, abound everywhere. Seals are often found along the coast. Many game-birds, such as wild geese and wild ducks, frequent the more secluded lakes and rivers, while partridges and quails are also to be found in some parts in plentiful numbers.

MAINE

Maine is the northeasternmost State of the United States. Its total area is 33,040 square miles, of which 29,895 square miles are land and 3,145 square miles are water surface. The coast measures 218 miles in a direct line, but following the outline and including the islands it is nearly 2,500 miles long. Mount Desert, the largest of the islands, is much the loftiest portion of the eastern coast of the United States.

THE STATE HOUSE AT AUGUSTA

The city of Augusta was fixed upon as the permanent capital of Maine because centrally located in relation to the settled area of the State and less exposed to attack than were the sea-coast towns. The selection of the location was followed by the erection of a State House modelled after that at Boston, and in 1832 the occupation of this building marked the actual removal of the State government to Augusta from Portland, which had been the temporary capital of the commonwealth.

Natural Resources. Maine's most valuable farm crops are hay, potatoes, oats, corn, and beans. Owing to the gain in population and the growing popularity of the summer resorts there is a large and increasing demand for dairy products in the State, and that industry is now one of much importance. Orchard and other fruits are generally cultivated, though, with the exception of the apple and the cranberry, for home consumption only.

In the extent of its fisheries Maine holds second rank, being surpassed by Massachusetts alone among the States. The value of the lobster fishery is greater in Maine than in all the other New England States combined, while in the catch of herring, alewife, salmon, shad, swordfish, smelts, and clams Maine is unequaled by any other State in that region of the Atlantic Coast.

ANGLING IN STONY BROOK, NEAR SOUTH PARIS, MAINE

In the wilds of the Maine woods the hunter and the fisherman find congenial sport. Even near the scattered villages of the settled parts, Nature extends a rugged welcome to the stranger. South Paris is a little place just beyond the foothills of the White Mountains. Around it lie wide stretches of gloomy forest, through which run numerous mountain brooks.

The mineral resources of Maine are important, the State ranking among the foremost in the Union in production of granite and slate. Much limestone is quarried and made into lime. Gold, silver, iron, lead, and zinc have been found, but not in sufficient quantities to make their mining a source of profit. Some copper is mined, however, and molybdenum is produced in Washington County.

Manufacturing Industries. Owing to the rugged character of the country and the sterility of large areas—for the valleys of the rivers form the only fertile parts of the State—agriculture has played but a relatively small part in the development of Maine. The leading industries are such as depend largely upon the bounty of Nature for the supply of raw material or for the requisite motive power. Cotton, woolen, and other mills, using the abundant water-power of the rivers for working up the timber and other products of the forests into useful forms, are most prominent among the industrial establishments of the State. Of these, the making of cotton goods leads. The cotton mills are located west of the Kennebec River and chiefly at Lewiston, Biddeford, and Saco. The manufacture of lumber and timber products is second in importance, while third in rank among industries come the woolen mills.

Since great forests still cover the central and northern portions of the State, its forest resources yet furnish, as for many years, a large part of its wealth, supplying the raw material for the many sawmills pulp, and paper mills. Pine was originally the leading timber cut, but spruce now occupies first place, with hemlock a close competitor. These woods are used largely in the making of wood-pulp for since the discovery of the process for making this into paper there has been a great development of the paper and pulp industry, which has now many mills and an enormous yearly output. The manufacture of birch wood into spools also employs much capital with large profits.

The canning industry, embracing the packing of sardines and other fish, as well as clams, sweet corn, blueberries, and tomatoes, has attained large proportions, the canning of sardines being the most important shore industry among those that are connected with the fisheries of the State.

In the days of "wooden walls," Maine was the chief shipbuilding State of the Union, constructing

THE LIGHTHOUSE AT PORTLAND HEAD, MAINE

The lighthouse of Portland Head stands on a rocky point of the Maine coast, guarding the channel between Cushing Island and the mainland. In clear weather the flash of its light meets the passing vessels, making for the harbor of Portland, and in foggy seasons the hoarse voice of its great trumpet is heard above the sound of the waters.

more than one-half of the sea-going vessels of the country. Even since the revolution wrought by the application of iron and steel to ship and boat building, that industry has continued to occupy an important place. It has now attained a volume that places it eighth among the principal industries of the State.

Cities. Portland, the metropolis of the State, located on Casco Bay, with a harbor celebrated for its depth and security, has gained high rank as a trading point, and is also important as an industrial center, having a number of manufactories for locomotives and carriages, and of canning establishments. Lewiston, an important cotton and woolen manufacturing city, is situated at the Falls of the Androscoggin. It ranks second to Portland in the value and importance of its industrial enterprises, and is the center of the cotton industry.

Bangor, about sixty miles from the sea, at the head of navigation, on the Penobscot River, is the natural center for the lumber interests of Maine and is one of the principal lumber depots of the world. Practically the entire timber product of the Penobscot Valley is shipped from Bangor, by vessel or by rail, or is used there in shipbuilding. Biddeford, on the Saco River, another prominent manufacturing town, has large cotton, woolen, and lumber mills, besides manufactories for cotton-mill machinery. The city has a large trade in farm products. Augusta, the capital of the State, situated at the head of navigation on the Kennebec River, has large paper and pulp mills and other manufactories. Saco, possessing water-power from the Saco River, is another important center of the cotton industry.

THE PUBLIC LIBRARY, PORTLAND, MAINE

A structure of rough freestone, built in the Romanesque style, contains the Public Library of Portland and also furnishes quarters to the Maine Historical Society, one of the most active of American learned associations. The building is the gift of a former mayor of the city, whose distinguished place among American scholars was won by historical research.

Summer Resorts. Of the many seaside resorts for which the Maine coast has long been noted, several of the most attractive are found on the historic island of Mount Desert, which lies about forty miles southeast of Bangor between Frenchmans Bay on the east and Blue Hill Bay on the west. This picturesque island has an area of about 100 square miles, its deeply indented coast being bordered by many islets. West of Somes Sound an inlet piercing the island deeply from the south, the peaks rise to about 1,000 feet, but in the east they attain a loftier elevation. On the west shore of Somes Sound is the site of the early Jesuit mission settlement of Saint Sauveur

Bar Harbor, on Mount Desert Island, has become one of the most celebrated summer resorts in the United States. Its climate is usually cool and refreshing in summer Fogs are frequent here, as at other points along this northerly part of the Atlantic Coast, and the water is considered by many rather cold for bathing. The surrounding scenery is, however, enchanting, and many small streams and lakes in the vicinity are frequented by anglers. Near Biddeford and Portland is Old Orchard Beach, another notable seaside resort.

FOREST SCENE IN THE MAINE WILDERNESS

Historical. The coast of Maine is supposed to have been seen by early French fishermen and traders. In 1607 the Plymouth Company, having obtained a grant of land, sent settlers to Maine, but, discouraged with the experiences of the winter, all of the survivors returned to England the following year. A French Jesuit mission came into existence at Mount Desert in 1613, but was destroyed by a Virginia fleet. After 1620 a grant of certain sections was made to Sir Ferdinando Gorges, Capt. John Mason, and other promoters of colonies, and settlements were made at Pemaquid, Monhegan, Saco, and other points along the coast. Under a royal charter granted to Gorges, a capital was established in 1641 at Gorgeana, the first chartered city in America. Conflicting claims arose over this territory, and in 1677 Massachusetts, which had begun to govern Maine about 1652, purchased from the Gorges heirs their interest in the grant. From that time, for more than a hundred years, the history of Maine was merged in that of Massachusetts.

During the various struggles with the French and Indians Maine suffered so severely that its progress was materially delayed. The settlements were devastated by torch and tomahawk. Maine took an active part in the Revolutionary War. The District of Maine finally was separated from Massachusetts, and on March 15, 1820, Maine was admitted into the Union. During the War of 1812 the eastern part of the State was occupied by British troops and the eastern and northern boundaries were not settled definitely until 1842.

CATHEDRAL ROCK, MOUNT DESERT ISLAND

Near Bar Harbor are points where the waves of the sea have worn great arched passages in the beetling cliffs. These, for obvious reasons, are commonly called "The Ovens," but more fanciful titles are sometimes used, like that given to Cathedral Rock, into the base of which a natural tunnel extends through an opening like the doorway to an old church.

NEW HAMPSHIRE

New Hampshire, one of the thirteen original States of the American Union, has an area of 9,305 square miles including a water surface of 300 square miles. The State has only eighteen miles of sea-coast. The estuary of the Piscataqua, which never becomes icebound, is the only harbor of real importance.

Farms and Fisheries. While agriculture is not at its best, it engages the attention of a large proportion of the people of this rugged land of long winters. The area included in farms now constitutes three-fifths of the total land of the State. However, only a part of this area is improved land. But while general farming and the extensive cultivation of hay and cereals have fallen off there has been, on the other hand, a substantial development in dairying, poultry raising, market-gardening, and fruit growing, special branches of agriculture that involve the intensive cultivation of small areas of the most fertile soil. The result has been a marked advance in the value of farm products. The principal cereals now grown in New Hampshire are corn, oats, barley, and buckwheat. The principal animal products are milk, butter and cheese, poultry and eggs, and wool. Throughout the past fifty years there has been a steady increase in the number of horses and dairy cows owned in the State.

In its fishing industry New Hampshire is the least important of the coast States of New England, but there is an annual catch of haddock, cod, and lobsters brought in by the many small fishing boats belonging to the coast towns, which amounts in the aggregate to a fairly large value. In the mountain streams of the interior are salmon, salmon trout, brook trout, and other food fishes, but these have no importance as a commercial product of the State.

THE STATE HOUSE AT CONCORD

Concord became the permanent capital of New Hampshire in the year 1807, when the legislature, which had previously changed its meeting place annually, began continuous sessions there because of its central position and pleasant situation. The old State House of granite is a structure of dignified character that has afforded shelter to several generations of State law makers. Its construction was advanced sufficiently for occupation by the State government in 1819 and the building was enlarged in 1866.

Forests and Minerals. The prosperity of New Hampshire depends largely upon its unrivaled supply of water-power and the consequent development of those textile industries with which this section of New England has long been identified. However, the forests, which still cover about one-half of the area of the State, are among the most important elements of its wealth. The white pine forests which originally covered large areas, chiefly in the valley of the Connecticut River, are now represented mostly by trees of second growth, but spruce is still abundant in the northern sections. The mineral resources of the State are considerable. Iron, copper, lead, zinc, and argentiferous galena are found in various localities, but the working of metallic ores has received almost no attention. Quartz, mica, beryl, steatite, and tourmaline occur. The rocky strata of the mountains consist of granite, various kinds of gneiss and schists, mica, talc, limestones, slates, and quartzites. The characteristic quarry product is that of granite, which is the dominent formation and has given to New Hampshire its name of the Granite State.

A VIEW IN CRAWFORD NOTCH

MOUNT CHOCORUA, WHITE MOUNTAINS

One of the most beautiful of the White Mountain peaks is that named Chocorua, from an Indian chief who met a warrior's death upon its slopes in the days of the pioneers. The mountain summit is more rugged and bare than those of its neighbors, and its expanse of naked granite reflects the sunlight with pleasing effects. From the mountain paths may be seen deep gorges and steep cliffs of great beauty.

Manufactures. The relatively small advance made in agriculture during the past half-century and the comparative decline in general farming have been accompanied by a steady development in manufacturing, which now occupies the leading place among the industries. In the volume of finished products, boots and shoes hold the leading place. The manufacture of cotton goods, for many years the leading industry of the State, dates from 1804, and the mills now have an enormous output. Among industrial enterprises woolen manufactures rank third in importance. The oldest industry in the State is the manufacture of lumber and timber products. The first sawmill in New England was built by Danish workmen, near Portsmouth, some time prior to 1635. From that beginning have sprung the hundreds of establishments now

operating in the State, whose output places this industry fourth in rank. Paper and wood-pulp mills, foundries and machine shops, tanneries, hosiery and knit-goods factories, flouring and grist mills, and cheese, butter, and condensed milk factories are the principal remaining industrial establishments in the State.

Chief Cities. Among the chief cities, the great manufacturing centers are most noteworthy. Manchester, on the Merrimac River, has developed remarkably in half a century. Its cotton and woolen industries are among the largest in the world, having the advantage of an immense water-power supplied by the Amoskeag Falls of the Merrimac. There are also extensive locomotive and fire-engine works, machine shops, paper-mills, and tanneries.

Nashua also is known chiefly as a large manufacturing center, particularly of cotton goods. It enjoys splendid water-power facilities. Besides cotton mills its manufacturing industries include the making of boots and shoes, furniture, and foundry and machine-shop products.

FALLS NEAR JACKSON, NEW HAMPSHIRE

Below Jackson, in the White Mountains, is the Goodrich Fall, once a cataract possessing great beauty, and even now presenting a striking appearance in time of high water. It is formed in the Ellis River, which here passes over great rocky ledges and falls into a deep basin eighty feet below.

Concord, the capital, is pleasantly located on the right bank of the Merrimac River. It has extensive manufactories for wagons and carriages, electrical supplies, and cotton and woolen goods. A fine-grained, light-colored granite is largely quarried in the neighborhood.

Portsmouth is the only seaport of the State and is noted for its excellent harbor, which is one of the best on the Atlantic Coast. The city is situated on the western shore of the broad and deep estuary of the Piscataqua, about three miles from the open ocean. It has an extensive foreign and domestic coastwise trade, besides being a seat of important manufacturing enterprises, embracing foundries and machine shops, shoe factories, and breweries.

Dover, the oldest settlement in the State, lies near Portsmouth, and maintains important manufactures by the water-power of the Cocheco River. Keene has a special repute for its production of wooden ware of all kinds. Berlin is a point for the making of wood-pulp, and its mills are among the largest in existence. Laconia is the center of a lake district that is known for its summer resorts.

Resorts. During the summer season many tourists and summer visitors are attracted to Portsmouth and other old towns along the seashore of New Hampshire, as well as to various points such as the Isle of Shoals. In all these places modern hotels exist which cater especially to the wants of the temporary summer population. The chief fame of New Hampshire, as a place for resort, however, is centered in the White Mountains, whose charm has drawn an annual flood of summer visitors for many decades. Railroad lines give entrance to the White Mountain region from several sides, and well-kept carriage roads or beaten paths afford visitors every facility for mountain climbing, or for seeking out those little scenes of natural beauty that mark all mountain regions. Several scenic features of the White Mountains have received world-wide fame among artists and travelers. Among these are the Flume, a great chasm in the massive rock formed by the slow action of water; the Old Man of the Mountain, a profile that chance arrangement of the rocks has created on the face of a great cliff; and Crawford Notch, a rugged defile that crosses the mountains where the Saco River flows. The ascent of Mount Washington, the highest peak of the group, is now made easy by a railway which enables cars to be dragged up the steep heights by a cog-wheel device. Summer hotels are scattered through the mountains at sightly points that may be reached conveniently from the railroad lines.

Historical. New Hampshire was visited by Martin Pring in 1603 and by Champlain in 1605, and its coast was carefully explored by Capt. John Smith later. The earliest settlements were made at Dover and Portsmouth in 1623, by colonists sent out under a charter granted to Gorges and Mason. In 1641, soon after Mason's death, the straggling fishing stations and towns of New Hampshire united with the Massachusetts Colony. Twenty years later Mason's heirs set up a claim to this territory, but it was made a royal province in 1679 instead of being restored to them, and a governor was appointed under a royal commission.

In the War of the Revolution, New Hampshire took a patriotic and conspicuous part, publicly proclaiming her independence and establishing a temporary government to continue during the war. On every battlefield from Bunker Hill to Yorktown her sons were nobly represented, and at Bennington, Stillwater, Saratoga, and Monmouth they were particularly distinguished for their bravery. Her delegates in the Continental Congress signed the Declaration of Independence and contributed to the adoption of the Federal Constitution. New Hampshire ratified the latter instrument in 1788. Being the ninth State to take this step, she secured the establishment of the federal Union in its present form.

The provisional government, formed upon the retirement of the royal governor at the outbreak of the Revolution, was superseded by a State constitution in 1784. This instrument was thoroughly revised in 1792, and, with minor changes, was used till 1877, when another revision was adopted, which is still in force. In the War of 1812 and in the Civil War New Hampshire amply sustained her reputation for courage and patriotism.

PUBLIC SQUARE AT NASHUA, NEW HAMPSHIRE

Nashua is a busy manufacturing city at the confluence of the Merrimac and Nashua rivers. Industrial prosperity has been accompanied by a development in public spirit, which is evidenced in a notable number of public improvements. Among these is an attractive little park, surrounded by shade-trees and containing a monument commemorative of historic events.

VERMONT

THE STATE HOUSE AT MONTPELIER

In 1808 the Vermont legislature settled into the permanent custom of holding its sessions at Montpelier, having previously had no established capital. The town was equally accessible from either side of the Green Mountain range and therefore was well adapted for legislative gatherings. The present State House, which replaced an older building that had been destroyed by fire, is a granite edifice built in the form of a cross and was first occupied in 1859 by the legislative branch of the government.

Vermont, one of the New England States, is the only one of that division without a sea-coast. It has an area of 9,565 square miles, of which 430 square miles are water surface. Part of the western boundary of the State lies in Lake Champlain. The larger portion of the lake's 600 square miles of area is in Vermont. It is 125 miles in length and is navigable by the largest vessels.

Resources and Industries. Vermont is noted for the quantity and the variety of its quarry products, especially its beautiful marbles, which are shipped to points all over the United States and abroad. In the output of marble it takes first rank among the States. In the production of granite Vermont holds the fourth place. In the production of slate, which is an important industry in the southwestern part of the State, Vermont is second only to Pennsylvania in its output.

Vermont leads all other States in the production of maple sugar. The fruit commonly grown throughout the State is the apple, the regions most favorable to its cultivation being the beautiful valley and islands of Lake Champlain. The State excels in dairy farming. Although large crops of hay are raised, the production of corn, oats, and potatoes is large, and the raising of sheep and other live stock is profitable, Vermont does not take high rank as an agricultural State. In the ratio of farm acreage, and in the value of farm property, there has been a steady decrease since 1850.

The decreasing value of the farming lands has led to an increased interest in manufacturing, for which numerous waterfalls furnish exceptional advantages. There has been a generally steady growth in manufacturing industries during the past half-century, a development all the more noticeable when compared with the small increase in population.

Notwithstanding the depletion of the forests, the leading industry of the State is still the manufacture of lumber, and the allied production of wood-pulp. Next in importance is the factory manufacture of cheese, butter, and condensed milk, an industry that has shown remarkable growth. The manufacture of monuments and tombstones ranks third in importance, every branch of the industry showing a noteworthy development, and the marble and stone works are increasing in number. Cotton and woolen mills also are notable.

VIEW IN THE CLARENDON GORGE

A rocky gorge near Clarendon Springs, in Vermont, is notable among the scenic features of the State because of its rough beauty. It is a great ravine with steep walls forming fantastic nooks or, in places, descending abruptly to the jagged bed of the stream below.

Cities. Burlington, the commercial metropolis of the State, and the site of the University of Vermont, is on the eastern shore of Lake Champlain. It has a fine harbor, and the total value of its manufactured products is very large. Rutland ranks second in size and is famous as being the center of one of the most important quarrying regions in the world. Barre, a flourishing city six miles southeast of Montpelier, is the chief center of the granite industry Montpelier, the capital of the State, is situated on the Winooski River in a narrow valley bordered by high hills. The city has manufactories for flour, leather goods, and machinery. St. Albans, in the northern part of the State, is a great butter and cheese market. St. Johnsbury, on the Passumpsic River, is celebrated for its scale manufactory, one of the largest in the world. Bennington, near the scene of the famous defeat of the British in 1777, is surrounded by a good farming country and has a number of factories and mills.

Historical. Champlain discovered and explored the lake which bears his name in 1609, when the territory now included in Vermont first became known to Europeans. The lake and its borders were thoroughfares during the next century for various military expeditions in the Indian and Colonial wars. The first permanent settlement was made by Massachusetts troops at Fort Dummer, near the site of Brattleboro.

During the Revolutionary War Vermont held a position unique in American history, being an independent republic denied admission to the confederacy of States, yet furnishing men and munitions of war for a common cause. This anomalous condition of affairs was due to the attitude of New Hampshire and New York, both of which claimed the region, although their demands were resisted by the Vermont settlers. It was not until 1790 that New York renounced her territorial claims, and on March 4, 1791, Vermont became one of the United States, the first State admitted into the Union after the ratification of the Federal Constitution by the original thirteen commonwealths. In 1864 the State was invaded and the town of St Albans occupied by Southern sympathizers having headquarters on Canadian soil, and a little later it was made the basis for Fenian raids against Canada.

MASSACHUSETTS

Massachusetts, one of the thirteen original States, has a total area of 8,315 square miles, including 275 square miles of water surface. Its coast line is about 250 miles in length. Cape Cod Peninsula, curving northward, encloses Massachusetts Bay, which gives the Commonwealth the name of "the Old Bay State." The islands of Nantucket and Martha's Vineyard lie a few miles off the coast.

THE STATE HOUSE AT BOSTON

Boston became the capital of Massachusetts in 1630, when Governor Winthrop and his people settled there in order to be near good spring water. For nearly three centuries it has continued the center of official power. The present State House is the growth of a century. Originally built in 1798 it has been enlarged, by successive additions, to its present size. The edifice stands upon the highest point of Beacon Hill and its great gilded dome is visible from nearly every part of the city.

Agriculture. Massachusetts has shared along with the rest of New England and, in fact, with nearly all the North Atlantic States, the change in the conditions of agriculture that has been most marked since 1880, namely, the gradual substitution of intensive for extensive farming. In this process the farmers have gradually turned from general farming, and from growing cereals in particular, to dairying, poultry raising, market-gardening, fruit growing, and floriculture, to meet the demands of a rapidly growing urban population, and are not affected by Western competition or by the general development of transportation facilities. In the western highlands of the State, the soil, except in the river valleys, is better suited for grazing than for cultivation. As in Vermont the sloping pasture lands of the hill country are utilized for the maintenance of small herds, and the output of the dairies is one of the chief forms of farm produce. Many of the northwestern towns, especially in the Berkshire Valley, have butter and cheese factories that draw their materials from the surrounding country. Milk is shipped to the larger cities of New England and New York from a great number of rural stations along the railway lines. Stock-raising is an established feature of farm work also. Horses are raised as draft animals, and sheep-raising is followed to a considerable extent. Valuable stock farms for the maintenance of blooded stock exist at a number of points in the State. In the central and northeastern counties the soil generally yields good returns when subjected to careful tilling. In the lowland sections of the southeast are numerous swamps and bogs, where cranberry culture is more extensively engaged in than elsewhere in the United States. Among the leading crops of the State are included hay, corn, potatoes, oats, rye, and tobacco. With the exception of tobacco these staple crops are mostly absorbed within the State. Tobacco, however, enters a wider market. It is grown chiefly upon the rich alluvial plains of the Connecticut River valley.

Forests and Fisheries. There is almost nothing left of the great sweep of primeval forest which covered the State when the pioneers hewed out clearings for their farms in days agone. Nearly three centuries of human occupation have left their results in the form of woodland that has been cut over and over again, and which has practically no value for general lumbering purposes. Here and there small saw-mills are able to turn out rough lumber for local purposes in small amounts, but in the aggregate this has no great importance.

The fisheries of New England and Newfoundland employ heavy investments of Massachusetts capital. The Nantucket shoals supply great quantities of mackerel and cod, while lobsters are found in considerable numbers along the coast. By far the greater part of the fisheries product, however, is derived from the international fishing grounds farther north, and the importance of the investments in this work is shown by the frequency with which their interests have been consulted during the conduct of diplomatic negotiations between the American and Canadian governments.

Mineral Resources. Brown hematite iron ores are mined in Massachusetts in the districts lying along the border of New York. These ores have commercial value for some purposes and the production is continuous. Lead ores with silver in combination are mined in the western part of the State, and near Newburyport in the northeastern portion. The output is inconsiderable. The more valuable mineral products of the State are of the non-metallic kind. Some coal is found in the Narragansett Basin, but under present commercial conditions it is without value. Emery of excellent quality is produced from deposits at Chester; asbestos is found near Dalton, in Berkshire County, and talc in the same vicinity.

PLYMOUTH HARBOR, MASSACHUSETTS

The oldest town in New England is Plymouth, which extends around the curved shores of Plymouth Harbor and back upon the slopes of the low hills that lie adjacent. Here the famous band of Pilgrims landed in 1620 and founded the little democracy so famous in American history. The Plymouth of to-day is an important industrial town and the shallow harbor is a port of considerable coastwise commerce. The chief interest of the place for strangers, however, lies in its historic associations.

Massachusetts ranks first among the States in the production of granite. A dark variety found near Quincy is especially beautiful, and that located near Chester is particularly suitable for monumental and building purposes. The marble and limestone of Berkshire are used for building stone and for the manufacture of lime. It has been known for some time that deposits of slate exist in the State, but the development of the product of these quarries was only begun recently.

Manufactures. Massachusetts is pre-eminently a manufacturing, as distinguished from an agricultural, State. Among the States of

PUBLIC SQUARE AT WORCESTER, MASSACHUSETTS

Worcester is counted among the older interior cities of New England and resembles Boston in many respects. Like the latter it has a park in the center of the city which is formed from the land of the old-time village Common, and still bears its cherished title. Near it rises the splendid City Hall, from the entrances of which broad walks lead to the busy public square.

the Union it stands fourth in the aggregate volume of its manufactured products, while in productivity per capita it surpasses every other State. This high rank is due to the abundance of water-power, and to the peculiar mechanical genius of a people familiar for generations with mechanical devices. In many important lines of industry this State was the pioneer in establishing successful work in America. The first cotton mill in the United States was established at Beverly in 1788, and the first power loom in the country was installed at Waltham in 1814. Lowell was the site of the first American print works, erected in 1822. The making of woolen cloth was begun at Rowley in 1643, and the making of boots and shoes as an industry started at Lynn in 1635. The State has always led in the production of cotton goods and now produces one-third of the total output of the country. It is also the leading commonwealth in the making of worsted and other woolen goods, its products in each case approaching the proportion of one-third of the nation's total. Silk fabrics are being turned out in an annually increasing quantity. In the making of boots and shoes Massachusetts is also the leading State. Nearly one-half of the country's product in this line is of Massachusetts manufacture. An enormous output of foundry and machine-shop products is reported, although the State has no special fame in this line. Paper and wood-pulp manufacture is growing rapidly of late, stimulated by an increased demand and by the introduction of new devices for production. The making of rubber goods is largely centered in Massachusetts, the important inventions on which the industry is based having been made by Massachusetts men and adopted by local capitalists. The smelting of iron was a pioneer industry of this commonwealth, and the present output has an annual value of many millions of dollars, although overshadowed by the production of the great iron-mining States.

Chief Cities. Boston, the capital of Massachusetts and the metropolis of New England, has for many years held a commanding position among the commercial cities of the American Union. The area of the city is forty-three square miles. Charlestown, where extensive docks are built, is connected with Boston by the Warren Bridge, and by a magnificent steel bridge. East Boston is also a district with dock facilities, while South Boston possesses many piers and railroad warehouses. The municipality possesses the most extensive park system in this country. Included in its system is the Arnold Arboretum, a combined park and scientific station, the greatest of its kind in the world, devoted to the collection, cultivation, and study of trees and shrubs especially those of North America. The Common, a famous park of forty-eight acres in the heart of the city, was set apart for public uses in 1634. The Old South Meeting-House and Faneuil Hall, the latter called the "Cradle of Liberty," are buildings ranking in historic interest with Independence Hall in Philadelphia. Boston has long been celebrated as a center of education, art, and letters.

Worcester is the second city of the State in size, and on account of its political influence and of its central position, has been called the "Heart of the Commonwealth." It contains many educational and literary institutions, and, with Taunton and Springfield, it ranks foremost in the steel and iron industries of the State. Fall River is located at the mouth of the Taunton River, on an arm of Narragansett Bay, and is the largest city in the southeastern part of the State. It early became an industrial center on account of its natural water-power, and is now a large producer of cotton cloth.

Lowell, with an unrivaled water-power from the falls of the Merrimac

VILLAGE STREET IN DEERFIELD, MASSACHUSETTS

Deerfield is a quiet and pleasant village in the Connecticut Valley to which many families from the larger cities come for summer residence. Like nearly all of the older towns of Massachusetts, Deerfield has historic associations. A famous incident of colonial border warfare was the attack on Deerfield by Indians and French in 1704, when the town was destroyed and two-thirds of the people carried to Canada as captives.

ON THE CHARLES RIVER

Extending in a wide curve through pleasant rural scenes, and passing many suburban settlements and country homes, the Charles River, near Boston, has a beauty that makes it a favorite place for summer boating excursions.

River, is one of the great textile centers of America. Cambridge is the seat of Harvard University, founded in 1636, the oldest institution of university rank in the republic. Lynn is famous as a center of the boot and shoe industry. Lawrence, one of the most thriving manufacturing cities of the State, possesses large textile mills. New Bedford is noted for cotton-spinning and fishing enterprises. Springfield is famed for its scenery and its arsenal, where the Federal Government manufactures arms for the military service.

Holyoke, on the Connecticut River, has an unusually valuable water-power supplied by that stream; formerly noted especially for its paper-mills the city now possesses a large number of manufactures of other kinds. Brockton and Haverhill are manufacturing towns in which the making of foot-gear leads in importance. Salem, the second oldest city of New England, is located on an arm of the sea and has a good harbor. It is an industrial city with varied manufactures. At one time Salem was a thriving commercial port with a fleet trading to all parts of the world, but this distinction is lost and its principal trade is the distributing to the interior cities of New England coal brought to its wharves by ocean vessels. Fitchburg, on Nashua River, and Taunton, on Taunton River, are active towns engaged largely in the manufacture of machinery and metal-work of various kinds. Gloucester, the seat of the greatest fishery interests in the country, is one of the foremost cod and mackerel fishing ports in the world. Waltham is an industrial city noted chiefly for its watches.

Historical. Massachusetts was first colonized by "the Pilgrims," a band of religious enthusiasts who had arranged to establish a plantation in Virginia but who were landed instead upon the shores of New England, where they founded the colony of New Plymouth, at the present town of Plymouth. Later, in 1628 and afterward, a company of English Puritans established the colony of Massachusetts Bay in the region from Salem to Boston. This group secured a royal charter and attracted heavy immigration from England. Growing strong with numbers it dominated all New England politically, and was distinctly disaffected toward the home country. After repeated evidences of the latter fact the English government canceled its charter and reorganized it as a royal province, merging with it the New Plymouth colony under the new charter of 1692. Outside of politics, the great events of this period were the Indian uprising called King Philip's War in 1676, and the Salem witchcraft delusion of 1698. During the 18th century Massachusetts developed a large ocean commerce and took a prominent part in the colonial wars with French Canada. The traditional disaffection toward England persisted, however, and the colony led in the general uprising that developed into the War of Independence. The earliest battles of the Revolution were fought here, and the new State was influential in various steps that ended with the organizing of the republic.

VISTA IN COMMONWEALTH AVENUE, BOSTON

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Chief in fame among the exclusive residence streets of Boston is the stately boulevard called Commonwealth Avenue. Down its center extends an attractive forested parkway, with broad walks and bits of lawn, broken at intervals by open spaces where stand statues of famous New Englanders. On either side the Avenue is lined with long series of palatial dwellings.

During the 19th century Massachusetts was famous as the center of a number of great movements of social and political reform, more especially the anti-slavery movement which precipitated the War of Secession and guided reconstruction legislation. Although negro slavery existed in Massachusetts during colonial times its influence was small and abolition took place at an early date. When the anti-slavery agitation of the middle of the 19th century arose several Massachusetts men were counted among its greatest leaders. The activity of this element and its supporters was influential in continuing and finally deciding the border struggles of the early days in Kansas. Succeeding years saw anti-slavery feeling dictate the course of politics in the commonwealth and link the public opinion of the State inseparably with those views toward slavery which were dominant during the period of the conflict between North and South.

Education. Massachusetts was the earliest among American commonwealths to develop a system of public schools and its example has had a profound and far-reaching influence upon the educational policy of the nation at large. Harvard College was the first American institution of collegiate rank and its outgrowth, the Harvard University of to-day, ranks first among the universities of the nation. Other institutions now supplement the work of the older institution in advanced instruction, and a splendid system of secondary schools is organized throughout the State.

LEAD MINE AT WEST STOCKBRIDGE, MASSACHUSETTS

At a number of localities in the western part of Massachusetts are rocks containing lead ores. These deposits have been known, in some cases, for more than a century. From time to time mining corporations have worked them with success, although the margin of profit has not been great enough to build up large mining industries of permanent character.

RHODE ISLAND

Rhode Island, the smallest and most densely populated State of the Union, is 1,250 square miles in extent, including 197 square miles of water area. Its coast line of 480 miles contains the great indentation of Narragansett Bay, a magnificent body of water dividing the State into two unequal sections, and extending about thirty miles inland. Newport Harbor, one of the finest in the world, is protected by fortifications of great strength.

Resources and Industries. Most of the State is too hilly to be adapted to agriculture, but the islands of the bay are fertile and easily worked. On the whole, the land is much better adapted to grazing than to the production of grain. A very small proportion of the population, therefore, is engaged in farming. Corn, oats, and barley are the principal cereals. Hay is the most valuable agricultural product. Gradual abandonment of cereal production in Rhode Island, as elsewhere, has been attended by a corresponding growth in special branches of agriculture, such as dairying, poultry raising, culture of small fruits, and general market-gardening, for the products of which there is an increasing demand. Narragansett Bay has long been famous for its clams, and oyster planting in Providence River is a profitable occupation. Brick and tile making has now become a lucrative industry, and there are a number of quarries of granite and limestone.

Ranked according to the number of spindles employed, Rhode Island is second only to Massachusetts among the States in the amount of actual production of textiles, and holds first place in the per capita quantity and value of cotton, woolen, and worsted products. The manufacturing industries of the State are widely diversified, but there are special branches in which the State has attained world-wide reputation The fineness of its textiles, the beauty and wealth of its manufactures of gold and silver, the products of its foundries and machine shops, its fine tools, which are used in every quarter of the globe, the favor its steam-engines have acquired in manufacturing circles, its enormous output of rubber boots and shoes, all combine to extend its reputation.

THE STATE HOUSE AT PROVIDENCE

Providence, founded by Roger Williams and always a center of Rhode Island's political life, has been a capital city since the General Assembly began holding its sessions there in 1648. Newport, however, was the alternative capital of the State until 1900, when the present splendid State House of marble and granite was completed sufficiently for occupancy. The State offices were settled there and Providence henceforth enjoyed, unrivaled, the prestige of capital city of the Commonwealth.

Cities. Providence is the capital and commercial metropolis of the State and the second city of New England in wealth and size. It is pleasantly situated at the head of Narragansett Bay. On the heights of the eastern section of the city are the buildings of Brown University. The city is an important manufacturing center and has considerable ocean trade. Newport, formerly a city of commercial importance and a rival of New York, is now known almost exclusively as a fashionable summer resort. The Government has made Newport also a naval depot, the site of a naval war college, and the base for maneuvers of the North Atlantic Squadron. Pawtucket, the second city of the State in population and commercial importance, has many important industrial enterprises of which the leading ones are the manufactures of cotton and of worsted goods. Woonsocket and Central Falls contain large cotton and woolen factories.

Historical. The pioneer, William Blackstone, came in 1634. Two years later the first important settlement in the State was made by Roger Williams at Providence. Williams had been banished from Massachusetts for his vigorous criticisms of public policy. Shortly afterward William Coddington with a band of followers, who also were practically exiled from Massachusetts through religious opposition, bought the island of Aquidneck and established the settlements of Portsmouth and Newport. In 1643 Roger Williams went to England and returned the following year with a parliamentary charter, incorporating the towns of Providence, Portsmouth, and Newport under the name of the "Providence Plantations in the Narragansett Bay in New England," under which charter in 1647 the first General Assembly convened at Portsmouth.

Rhode Island suffered severely during King Philip's War in 1676. In 1709 the colony purchased of the Indians nearly all the lands that it now occupies as a State. During the Revolution the French troops that were sent to aid the colonies occupied Rhode Island for a time. The State was the last to ratify the Federal Constitution, postponing action until after the new government was organized. In 1842 it was the theater of a civil war, called Dorr's Rebellion, a term derived from the organizer of it.

BEACON ROCK, AT NEWPORT, RHODE ISLAND

The old colonial city of Newport is now famous as the summer home of scores of wealthy families from the Eastern cities. Within a radius of a few miles from the city the hills and headlands are crowned by beautiful residences to which custom gives the all-embracing title of "cottage," although many are palatial in proportions. Around these the natural scenery, diversified by rugged rocks and its beauty enhanced by the skill of the landscape artist, furnishes an appropriate setting.

CONNECTICUT

Connecticut, one of the thirteen original States, has an area reckoned at 4,990 square miles, of which 145 square miles are water area. The coast line of the State is about 100 miles in length and is indented by many small harbors. That of New London is one of the best along the Atlantic Coast. The greater part of the southern coast is bounded by Long Island Sound.

Resources and Industries. A milder and more equable climate and a richer soil than that of other New England States combine to make Connecticut one of the most favored farming regions in that group. The larger portion of the land capable of cultivation is found in the river valleys, especially those of the Connecticut and the Housatonic. Of such land the area devoted to the production of hay is three times that applied to the growing of all other crops. Other crops are tobacco, potatoes, corn, rye, oats, and fruits. The Connecticut tobacco leaf is in demand among cigar manufacturers as a high-grade wrapper. The leading agricultural industry of the State, however, is dairying.

THE STATE HOUSE AT HARTFORD

Since the year 1637 when the first General Court met there because it was the chief up-river settlement of the Connecticut wilderness, Hartford has been the capital of the commonwealth, sharing the honor with New Haven, however, from 1701 to 1878. The present handsome white marble edifice which overlooks Bushnell Park and the Memorial Arch was completed sufficiently for occupation in 1878. It is a fire-proof structure of fine proportion, built in the secular Gothic style.

Mining was at one time an important source of profit and, although not at present as valuable as formerly, is still carried on. An excellent iron ore is now mined in the Housatonic Valley, as it has been for 150 years. The quarry products comprise granite, sandstone, and limestone. Interest in the fisheries has been somewhat revived by the successful efforts that have been made to propagate shad in the Connecticut River. Oyster planting and dredging are important at a number of places along the Long Island Sound, while the shores yield a large quantity of clams and lobsters.

Until 1810 Connecticut was almost exclusively an agricultural commonwealth, but even before that date the people had shown the possession of that peculiar mechanical ingenuity and faculty of invention which have made this small State, in spite of its lack of coal and the scantiness of its supply of iron, one of the busiest regions of industrial activity in the world. Connecticut is the place of origin of some of the greatest inventors and inventions this country has known. The State still holds supremacy in the number of its patentable inventions, having entered more patents in proportion to population than any other State. It is worthy of note that the wage-earners holding employment in the factories comprise nearly one-fifth of the aggregate number of inhabitants of the State.

Manufactures. The manufacture of textiles in Connecticut leads all other industries with a product that is exceeded by few States. The cotton industry dates from about 1804, when a mill was established at Vernon, in Hartford County, although it was not until after the War of 1812 that the large factories began. The first woolen factory in New England was organized at Hartford in 1788. Connecticut was the fourth of the colonies to engage in silk culture and almost the only one to follow it to any notable extent. Mulberry trees were introduced about 1732, but Mansfield was the only town where sericulture became a fixed industry. A silk factory was established there in 1758. There are now some forty silk mills in the State.

Brassworking ranks next to the textile industry in importance. Prior to 1835 all pins used in the United States were imported, but automatic machines were introduced in 1841 at Waterbury and Derby, where hooks and eyes also were made. Clock-making was begun by Eli Terry at East Windsor (now South Windsor) in 1792, but Chauncey Jerome revolutionized the industry in 1837 by using brass instead of wooden wheels. The rubber industry dates from the invention of the vulcanizing process by Charles Goodyear about 1844. The manufacture of firearms was begun at Whitneyville early in the century by Eli Whitney, inventor of the cotton-gin. In 1829 Samuel Colt devised a rotary revolver and subsequently established the great Colt Works at Hartford. The Gatling gun is made there and the Winchester rifle at New Haven, while Derby and Bridgeport also produce improved ordnance. The sewing-machine industry was begun at Bridgeport, being based on the invention of Elias Howe. The process of electro-silver plating was invented at Hartford about 1846 by the Rogers Brothers, and there are now extensive plants at other towns. Groton, opposite New London, is the seat of a large steel shipbuilding plant.

Chief Cities. Hartford, the State capital, lies on the Connecticut River, fifty miles from Long Island Sound It contains many very substantial and handsome buildings. In addition to being the center for the charitable

BRIDGEPORT HARBOR, FROM THE WHARVES OF THE CITY

Bridgeport lies at the mouth of the Pequonnock River, which empties into an arm of Long Island Sound and affords large vessels an entrance to the wharves of the city. The harbor is safe and very accessible and the city is a port of much coastwise trade. Within the harbor the shores are low, and dotted with manufacturing plants, but on the Sound side the city possesses a park protected by a sea-wall.

and educational institutions of Connecticut, Hartford is an important manufacturing town, ranking fourth in the number of factories and the value of output among the cities of the State. It contains one of the most famous plants in the world for the manufacture of firearms. The city is also famous as a center of insurance interests of national reputation. New Haven, the commercial and manufacturing metropolis of the State, is situated at the head of a commodious harbor, four miles from Long Island Sound. It contains the buildings of Yale University, one of the oldest and most celebrated educational institutions of the country. This city has long held first rank among the manufacturing centers of Connecticut. The manufactures include cutlery and other hardware, cars, carriages, clocks, foundry and machine-shop products, firearms, and ammunition.

OSBORNE HALL, YALE UNIVERSITY

The quadrangle of Yale University at New Haven now has few of the venerable buildings that were familiar to past generations of scholars. In their places have arisen ornate structures far more beautiful in appearance. Osborne Hall, occupying the site of a wooden building erected in 1718, is one of the newer buildings.

Bridgeport, on Long Island Sound, stands third among the cities of Connecticut. It has a good harbor for small vessels. As a manufacturing center it ranks next to New Haven. Waterbury, on the Naugatuck River, is the third manufacturing city of Connecticut. This city contains some of the largest brassworking plants in the world, and is a center of the manufacture of watches.

New Britain possesses immense plants for the making of hardware, locks, and hosiery. Meriden finds its manufacturing specialties in metal work of silver, bronze, and brass, more especially silverware and plated ware for table use. New London, a seaport town with an excellent harbor, is the site of one of the government navy-yards, besides having factories for textiles and hardware. Norwich, on the Thames River, produces cotton goods, paper, and cutlery. At Danbury the specialty in the manufacturing line is that of hats, for which the city is widely known.

SCENE NEAR LITCHFIELD, CONNECTICUT

A pleasant farming country extends across the basin of the Housatonic River, in Northwestern Connecticut. Winding streams follow the gently sloping valleys and diversify the landscape, while natural conditions make the locality a splendid dairying region in which this branch of farm work is well developed.

Historical. The lower Connecticut Valley was first occupied by the Dutch, but in 1631 the Earl of Warwick transferred to Lord Say and Sele, Lord Brooke, and others, his Connecticut patent, which covered, in a vague way, territory stretching from Narragansett Bay westward to the Pacific Ocean. In 1634 a band of colonists from Plymouth established a settlement at Windsor, and shortly afterward another colony from Massachusetts founded Saybrook, at the mouth of the Connecticut River. In 1636 the tide of migration toward the Connecticut Valley was set in full flow by the settlement at Hartford of a large colony from Massachusetts, led by the Rev. Thomas Hooker, whose congregation had become dissatisfied with the policy of the Bay Colony. This was the earliest example of American State building by "going west" from older settlements.

The organization of a government distinct from that of Massachusetts dates from 1637, when a General Court assembled at Hartford. In the same year occurred the Pequot war, which broke the Indian power in the region, and cleared the way for further settlement. Soon after this, in 1638, New Haven was founded as a distinct colony having its own government. In 1639 the people of Connecticut adopted a constitution that is recognized as one of the earliest examples of a written constitution in America. Connecticut and Rhode Island are the earliest exemplars of the Federal system of government as used in America. A royal charter granted in 1662, merged the New Haven colony with its neighbor but New Haven held aloof from taking its part in actual union for several years longer.

From 1685 to 1687 James II. endeavored to abrogate the charters of all the colonies. Connecticut, however, disregarded the order to give up its charter, and Sir Edmund Andros, the Governor of New England, went to Hartford, to demand that the royal command should be obeyed. The charter, however, mysteriously disappeared, and there is reason to believe that it was secreted in the hollow of a tree that subsequently became famous as the "Charter Oak."

During the Revolutionary War no colony furnished so many men in proportion to its population as did Connecticut. General Washington had an able coadjutor in Governor Trumbull, whom he familiarly called "Brother Jonathan," a sobriquet that in time came to be applied to the nation as a whole. Connecticut took an active part in the War of 1812, although that struggle wrought the ruin of her West India and coastwise trades. Since that time the State has been chiefly notable for its triumphs, in the line of invention and industry.

CASTLE CRAIG, ON WEST PEAK, MERIDEN

Lying northwesterly from Meriden, one of the famous manufacturing towns of Connecticut, are the rugged Hanging Hills, of which West Peak is the westernmost height. On the summit of the Peak stands the lookout called Castle Craig, from which the visitor sees spread before him in a wonderful panorama miles of undulating lowland. The Peak is included in Hubbard Park, an expanse 900 acres in extent.

NEW YORK

NEW YORK is one of the original thirteen States of the American Union. Lying partly in the basin of the Great Lakes and St. Lawrence and partly on the Atlantic slope, it has an area of 49,170 square miles, including 1,550 square miles of water surface. For many decades New York has held first rank among the States in population. In 1820 it stood first, a position it has since retained continuously. Of the enormous population recorded in the State in 1900 the foreign-born inhabitants constituted 26 per cent. This alien element is principally concentrated in the cities, the proportion of foreigners in New York City being 37 per cent. Nearly three-fourths of the people live in cities or villages that have more than 4,000 inhabitants.

THE CAPITOL, ALBANY

The city of Albany was selected in 1797 as the permanent location of the State government. It was then the gateway to the unsettled West, and an important trade center, less exposed to foreign invasion than New York City, the colonial capital. The magnificent granite structure which now contains the State offices was completed in 1879 sufficiently for occupation. Upon it the wealthy Empire State has lavished millions upon millions, making it the most splendid State capitol in the American Republic.

Mountains. New York comprises a portion of the elevated table-land of the United States, broken in some places by mountain ranges, the remains of former colossal folds, containing some remarkable depressions that form the basins of lakes and channels of rivers. The mountains belong to the Appalachian system. They comprise three distinct groups, the Adirondacks, the Catskills, and the Highlands. The Adirondacks comprise a number of short ranges trending in general northeast and southwest, culminating in Mount Marcy (5,344 feet). The Catskills, in the central eastern part of the State, west of the Hudson River, are continuations of the Allegheny and other ranges in Pennsylvania, with which they are connected by the ridges commonly known as the Delaware Mountains. The Highlands (1,200 to 1,700 feet) comprise several low ranges in the southeast. They are continuations of the Taconic or Taghanic Mountains, which form a part of the Green Mountain folds and which extend south along the eastern border of the State from Lake Champlain, crossing the Hudson River at West Point.

Lakes. None of the Great Lakes, so-called, is included wholly within the limits of New York, but Lakes Erie and Ontario form a part of its boundary. The first named is the most extensive. Only seventy-five miles of its shore lies within the State, but the amount of business centering there is very large. Lake Ontario is next in size and its southern shore east of the mouth of the Niagara River is wholly within the State. Lake Champlain, between New York and Vermont, is a long, narrow sheet of water having points of great scenic beauty.

The lakes wholly within the State are estimated to number about 1,000. The Adirondack group, to which belongs Lake Champlain, comprises a large number of lakes, generally small, long, and narrow, lying within the valleys of the Adirondack folds. A few of these lakes find an outlet in the Hudson River, but most of them discharge into the St. Lawrence River. Lake George, a little west of the head of Lake Champlain, much the largest of these, is thirty-six miles long and 400 feet deep, with an elevation of 234 feet above tide-water. It is surrounded by mountains. The rich and varied scenery that environs Lake George, its islands, and the clearness of its waters, have made it a most attractive summer resort.

A group of lakes in the central and western sections of the State, the principal of which are Seneca, Cayuga, Oneida, Keuka, and Canandaigua, are very often termed the "Finger lakes." Seneca Lake, the largest, has a depth of 530 feet, and at its upper end is the picturesque, water-worn gorge of Watkins Glen. Chautauqua Lake, in the county of the same name, is the only body of water of considerable size in the State whose final outlet, through the Allegheny and Ohio rivers, is the Gulf of Mexico.

Rivers. One of the most beautiful watercourses in North America is the Hudson River, which flows for 350 miles southward from the Adirondack Mountains, finally mingling its waters with those of the

HARBOR SCENE, BUFFALO

Buffalo is one of the most important of the lake ports, and immense sums have been spent in dredging and protecting its miles of wharves and docks. Along the lake front mile after mile extends a splendid stone breakwater built by the United States government to aid the lake commerce. The busiest part of the water front is off the foot of Main Street, where the harbor consists of wide, canal-like channels separated by small islands on which stand immense elevators. These hold enormous quantities of grain shipped to Eastern markets from the Upper Lakes' ports.

Atlantic. During the greater part of the year the Hudson River is navigable for the largest class of river steamers to Troy, 151 miles from its mouth. At New York City the Hudson is often called the North River. Its principal tributaries are the Mohawk River on the west and the Hoosac River on the east. The St. Lawrence River, on the northern boundary, is navigable and includes the Lake of the Thousand Islands, an expansion of the St. Lawrence River, extending east from Lake Ontario about fifty miles, and dotted with about 1,500 rocky islands. The Oswego River, formed by the junction of the Seneca and Oneida rivers, is the outlet for the lakes of Central New York. The Susquehanna and Delaware rivers rise in the State, and the Genesee River, about 200 miles long, the most important stream of Western New York, is noted for its falls and cascades. The Falls of Niagara, between Lakes Erie and Ontario, celebrated as one of the greatest wonders of the world, are formed where the accumulated waters of the upper Great Lakes of the St. Lawrence system flow over the edge of the Niagara escarpment at a height of 164 feet.

EAST SIDE WHARVES, NEW YORK

The docks of the East Side of Manhattan Island are practically monopolized by the freighting lines and almost any day it is possible to count the flags of a dozen nations among the ocean vessels that are unloading or taking on freight at the various wharves. From Jeanette Park, not far from the Battery, may be seen a typical portion of the water front.

MANSION ON FIFTH AVENUE, NEW YORK

Fifth Avenue, lined for miles with the homes of the wealthiest people of New York City, is one of the famous streets of the world. The residence of the late Cornelius Vanderbilt is but one of many that equal the palaces of the Old World nobility.

The carnivorous animals found in New York include the black bear, panther, red fox, and gray fox, and many smaller wild creatures. The wolf and fur-bearing animals are almost extinct, but the deer is still found in the Adirondack region. Among birds of prey are the turkey-buzzard, eagle, goshawk, fish-hawk, and owl, and on the streams of the interior all kinds of water-fowl are found.

Climate, Flora, and Fauna. The range of altitude and latitude allows considerable variety in the climate of New York. The mean annual temperature is at 46°, the maximum being 92° and the minimum –12°. Long Island and the lower Hudson Valley are the most equable portions of the State. In the northern tier of counties the winters are long and the snowfall is heavy. Woodlands cover about 18,700 square miles, or 39 per cent of the area of the State. New York has taken steps to conserve its magnificent forest heritage in the Adirondack and Catskill mountains, where over 2,000 miles of timbered area have been made a preserve. In the north the forests consist mainly of oak, pine, white cedar, beech, tamarack, spruce, balsam-fir, and hemlock, while throughout the State are scattered areas of maple, hickory, elm, willow, black-jack, ash, and chestnut.

BROADWAY, NORTH FROM THE POST-OFFICE

At the Post-office building is a typical portion of Broadway, the busiest street of the greatest commercial city of America. From this point scores of office buildings extend southward, accommodating the business firms and corporations that have daily relations with the public. Northward from it are the retail establishments of trade, while on the side streets are the great wholesale houses.

Resources. New York ranks first among the States in population, manufactures, wealth, and commerce. It stands among the foremost in agriculture, while its mining, lumbering, and fisheries are also extensive. The dense urban population insures for the State a perpetually large demand for farm products, especially those of the dairy, orchard, and market-garden. The dairying industry has had a most remarkable growth, New York now standing in the front rank as a dairying State. Condensed milk is an important item of manufacture. More than one-half of the area of the State is under cultivation. The principal farm crops are hay, potatoes, corn, wheat, barley, rye, hops, and buckwheat. Fruits, especially apples, pears, peaches, plums, and cherries, grow in profusion in almost every section except in the extreme north, while the grape crop is enormous. New York leads all other States in its potato and hay crop, while in fruit it is second only to California. Horticulture is especially favored by the mild climate near the Great Lakes and around the smaller lakes. In the Adirondack region the resources, beside varied mineral deposits, include forests that are the basis of very extensive lumbering, paper-making, and wood-working industries.

Iron ore of an excellent quality is mined in several localities. Salt is found in the central and western parts of the State. New York has immense quarries of building stone, the products including limestone, sandstone, slate, granite, and marble. There is also a large annual product of crude petroleum. Extensive clay beds exist along the Hudson River; cement also is found in the same section. Some deposits of gypsum, talc, and graphite occur. The sea and inland fisheries of New York constitute important sources of commercial products.

SCENE ON BLACK RIVER CANAL

The canals of New York State are important factors in the State's commercial greatness. The Black River Canal serves to join the great Erie Canal with the Black River, a tributary of Lake Ontario. Its straight channel, in some places raised several feet above the surrounding fields, fairly represents the appearance of these artificial waterways.

Industries. The remarkable rise of New York as an industrial State has been due to a combination of causes. Rich soil, abundant water-power, an excellent climate, large forests, and extensive mineral deposits were natural resources most favorable to the development of commercial enterprises.

The industry of largest volume is the manufacture of clothing, the output being distributed over the whole country. Second in rank comes the making of foundry and machine-shop products.

PARK SCENE, ROCHESTER

Over the gorge of the Genesee River at the Lower Falls is the Driving Park Avenue Bridge, which connects two beautiful parks. This bridge, standing 150 feet above the stream, is believed to be the second largest single span in the world.

AUSABLE CHASM, CLINTON COUNTY

Textile factories are very numerous, turning out knit underwear, carpets, and cotton and woolen goods. In book publishing and piano-making New York City is the national center. The State stands well in the front rank in sugar refining and confectionery-making, while it exceeds other States in malt liquors and, excepting California, in wines. Lumber is brought from other States and worked up into finished products here, and wood-pulp, made from Canadian wood, furnishes material for the paper mills. In boot and shoe making New York is second only to Massachusetts.

Chief Cities. New York is the largest and most important city in the United States, and the principal depot of European immigration. The city has an area of 326 square miles, including the counties of New York, Kings, Richmond, and Queens. The harbor of New York is one of the most spacious in the world. Eighteen miles from the city is the entrance to the Lower Bay, which is connected with the Upper Bay or harbor proper by The Narrows, a strongly defended channel less than one mile wide between the Long Island and Staten Island shores. Within the city is Broadway, one of the most noted business streets in the world, and Wall Street, extending from Broadway to the East River, the monetary center of the United States. Two of the largest suspension bridges in the world connect New York and Brooklyn, a city of homes and churches, consolidated with New York in 1898.

Buffalo is the second city in size in the State. It is situated at the eastern end of Lake Erie and has the best harbor on the lower lakes. As the western terminus of the Erie Canal and an important railway center, it is the point of transshipment for a large part of the lake traffic in grain, lumber, and other freight. Rochester, on the Genesee River, has abundant water-power, important flour mills, many large manufactories, and extensive nurseries. Syracuse has important manufactories for clothing, typewriter supplies, and farming implements, and was long the source of the American salt supply. Albany, the State capital, is near the head of navigation on the Hudson River and is the terminus of the Erie Canal. Troy has a national reputation for its manufacture of shirts, collars, and cuffs, and contains also large iron and steel works and car shops. Schenectady manufactures electric supplies.

Historical. It was not until 1609 that the explorations of Champlain in the St. Lawrence Basin, and the exploration of New York Bay by Henry Hudson in the employ of the Dutch made this region known to Europeans. The first white settlements, following ventures made by Amsterdam merchants, were established at Albany and on Manhattan Island by the Dutch, who named the country New Netherland, and in 1621 the Dutch West India Company was incorporated with almost unlimited power to colonize, govern, and defend the territory. Under this corporation Manhattan Island became an important seaport.

In 1664 King Charles II., resolving upon a conquest of New Netherland, granted to his brother, the Duke of York, all the territory lying between the Connecticut River and Delaware Bay. In August of that year an English force appeared at New Amsterdam and demanded its surrender, and the entire country passed under English rule. The name of New Amsterdam was changed to New York, and Fort Orange was called Albany in honor of a title of the Duke of York. In 1673 a Dutch squadron took possession of the colony again, but the following year it was ceded to England, and was the property of the Duke of York until 1685. From 1685 until 1754 the colony was often the scene of border warfare due to French and English rivalry, while in its internal politics there were frequent manifestations of the growing spirit of American independence. In 1735 the verdict in the Zenger trial at New York City established the principle of the freedom of the press in American communities. In 1754 occurred the first effort to form a continental union of the Anglo-American colonies, the plan being broached and endorsed at a convention of colonial representatives held in Albany. During the Revolution the British held New York City, but the interior counties organized a distinct state government and lent aid to the patriot cause.

NEW JERSEY

NEW JERSEY is one of the thirteen original States of the Union. Its area is 7,815 square miles, of which 290 square miles are water surface. Of the total population of New Jersey, the inhabitants of foreign birth constitute nearly one-quarter. Two-thirds of the whole population resides in cities of 4,000 or more inhabitants.

THE STATE HOUSE AT TRENTON

Because of its position at the head of river navigation and on the highway between New York and Philadelphia, Trenton became the State capital under a statute of 1790, despite the rivalry of other New Jersey towns that desired the honor. Previously to this Trenton had aspired, although vainly, to be the capital city of the United States. The State House, built in 1792, remodeled in 1848, and enlarged later, is a stone edifice overlooking the Delaware River.

Highlands and Lowlands. The surface of the State falls geographically into two main portions, which may be approximately considered as extending north and south, respectively, of a line drawn from Raritan Bay to Trenton. The northern division consists of a series of highlands of varying elevation, and the southern is a lowland region, now undulating, now flat. Extending from the extreme northwestern border across the State lies the Kittatinny Mountains, a rocky, wooded range. At High Point, near the northernmost limit of the State, this range attains an altitude of 1,800 feet, which is the greatest elevation in New Jersey. South of this range is the Kittatinny Valley, a part of the great Appalachian Valley extending from the Hudson River to Alabama. This belt, from ten to thirteen miles wide, is characterized by high, rolling hills and by narrow intervening vales. The Highlands, a region of parallel ranges and deep, narrow valleys, lies southeast of the Kittatinny Valley, and the mountains here, as elsewhere in parts of Northern New Jersey, abound in beautiful scenery. The Kittatinny Mountains and Highlands both belong to the Appalachian system. The elevation of the latter range varies from 1,500 feet in the northwest to 600 feet in the southeast. Beyond the Highlands and to the southeast lies the Red Sandstone Plain, forming the southernmost section of the uplands. It consists of wide plains diversified by abruptly rising ridges of trap-rock. The region derives its name from the color of the soil, which is composed of red shales and red sandstones. The plains are almost wholly cleared and in farms, and form the most populous and highly cultivated districts in the State, while the ridges are in the main covered with thick forests.

THE FALLS OF THE PASSAIC RIVER, AT PATERSON

The Passaic River is an important stream of New Jersey, traversing a district noted for its manufacturing towns. At the city of Paterson the river has a sudden fall of some fifty feet, forming a cataract of considerable volume and attractiveness. Because of this cataract the stream is lined with factories and mills, but close by the falls the natural beauty of its shores remains untouched.

Rivers and Lakes. The State has two great drainage systems, one of which finds its outlet directly into the Atlantic Ocean and the other discharges into the Delaware River or into Delaware Bay. The swift-flowing streams of the northern part of the State wind about in serpentine courses, and, owing to their rapid descent from sources among the mountains and hills, possess remarkable water-power. The streams of the south flow slowly across the lowlands; in many cases they have cut deep channels through the yielding soil. The Passaic and Raritan rivers with their affluents drain four-fifths of that part of the northern half of the State which is tributary to the Atlantic Ocean. The Passaic is the largest stream within the State. Of the rivers in the south that discharge into the Atlantic the Mullica and the Great Egg Harbor alone are worthy of mention. The principal streams in the Delaware watershed are the Paulins Kill, Pequest, Musconetcong, and Rancocas, which flow into the Delaware River, and the Maurice, which empties its waters into Delaware Bay.

Among those natural features which aid to make Northern New Jersey attractive to the visitor are the mountain lakes of the Highlands. The largest and most frequented of these many upland

sheets of water are Lakes Hopatcong and Greenwood, but in the rugged fastnesses of the Highlands, within a picturesque setting of virgin forests, lie more than fifty of these mountain lakes. However, the loveliness of these placid waters is almost, if not quite, overshadowed for the average tourist by the charm, half natural and half artificial, of the watering-places along the Atlantic Ocean. Atlantic City, Long Branch, and Asbury Park are the most important of these, but favorite smaller resorts line the entire coast from Sandy Hook to Cape May. The varied attractions of this stretch of seacoast have made it famous throughout the world

BATHING IN THE SURF AT ATLANTIC CITY

New Jersey fronts the ocean with a long, sandy coast, having broad beaches affording ideal places for bathing. Because of the proximity of these beaches to two of the greatest cities of the country they are famous for the summer resorts that mark at intervals the entire "Jersey shore." Atlantic City is one of the best known of these resorts and its sea-front in the summer days is thronged with bathers.

Climate, Flora, and Fauna. The climate of New Jersey shows greater diversity than that of any other Middle Atlantic State. The mean annual temperature ranges from 49° in the Highlands and the Kittatinny Valley to 53° along the entire seacoast and in the southern interior. The mean for the summer ranges from 70° in the Highlands and the Kittatinny Valley to a little above 73° in the southern interior. Severe winters are almost unknown; the average winter temperature is 28° for the Highlands and the Kittatinny Valley and about 35° for the sea-coast. Although the climate is comparatively dry, the rainfall is from 25 to 50 per cent greater than in many of the Western States. The flora of New Jersey is that common to the Middle Atlantic States. The area included in forests comprises 2,069,000 acres. Pine and oak predominate in the pine belt; of the other trees in the State, the larger number consists of chestnut and cedar. In the fauna there is little that is distinctive. Wild game is not abundant; the deer, the fox, the bear, and smaller species are found occasionally in the mountains of the northwestern counties.

THE THEOLOGICAL SEMINARY, PRINCETON

The seminary which forms part of the Princeton University is one of the oldest and most famous of American theological schools. The influence of this institution has been potent in the moulding of denominational thought in the United States, and within this venerable building several generations of Presbyterian clergymen have received their training.

Resources. About three-fifths of the land surface of New Jersey is included in farms. There is great variation among the soils of the State. The Kittatinny Valley and the Greensand Marl Belt are the most productive; the cleared portions of the pine-barrens, when subjected to careful cultivation, also yield excellent crops. The change from extensive to intensive farming, observable everywhere in New England, is also noticeable in New Jersey; general farming is falling into disuse and dairying, fruit culture, and truck-farming are assuming its place. New Jersey stands well to the front among the States in quality of fruits, vegetables, cultivated flowers, poultry, and eggs. Pears, grapes, peaches, and apples are extensively grown and, in the swamps, cranberries. Of the total annual value of animal products, milk, butter, and cheese usually constitute more than one-half, and poultry and eggs comprise about one-fourth.

All of the coast counties are actively engaged in the fishing industry and the total value of the fishery products is large. Oysters, which form the most considerable item, are taken in large quantities both along the coast and in the Delaware River. The annual catch of shad in New Jersey exceeds that of any other State and comprises one-fourth of the total for the United States.

Iron ores are mined extensively, especially in Morris and Warren counties, the product being used largely in the furnaces of the Lehigh district in Pennsylvania. Zinc and copper also are found. In the production of clays New Jersey now ranks first among the States. The more common varieties found are those employed in the making of building and fire brick, stoneware and other potters' wares, terra-cotta products, and sewer-pipes. In the southern part of the State are found apparently inexhaustible deposits of glass sand. Granites are quarried in many places. New Jersey heads the list of States in the production of trap-rock for road-making, and natural fertilizers, such as greens and marl and swamp-muck, occur abundantly in many localities.

Manufactures. Although only sixteenth among the States in point of population, New Jersey stands sixth in value of manufactured products. More than one-eighth of the total population are engaged as wage-earners in manufacturing industries. In manufacturing activity the northern half of the State is far in advance of the southern. Textiles form the most important division of the manufactures, and

THE PALISADES OF THE HUDSON RIVER

The massive walls of rock that tower aloft upon the west bank of the Hudson River rank among the scenic beauties of America. The cliffs, rising almost directly from the water's edge in a single escarpment, range in height from 200 to 550 feet, and extend about thirty miles along the stream. They now form part of an inter-state park.

of these silk and silk goods are the principal item. Most of the silk mills are in or near Paterson, on the Passaic River. The other textile industries include dyeing and finishing, and the manufacture of cotton, worsted, woolen, and knit goods, carpets, rugs, shoddy, and hosiery.

New Jersey ranks first among the States in the refining of copper ores, and every department of the iron and steel industries is represented in the State. In the refining of petroleum, New Jersey is second only to Pennsylvania. In the manufacture of pottery, terra-cotta, and fire-clay products New Jersey ranks third, being exceeded by Ohio and Pennsylvania. All important varieties of brick and tile, from ornamental terra-cotta to sewer pipe, are made. New Jersey is also one of the three States that produce china. The manufacture of glass antedates the Revolutionary War and now forms one of the distinctive industries of the State. New Jersey also occupies the fourth place among the States in the manufacture of jewelry, of which Newark is the chief center.

A VILLAGE STREET, BLOOMFIELD

No more attractive residence centers can be imagined than some of the quiet little towns of the Atlantic Coast States. Decades of wealth and culture are reflected in the beauty of streets and homes, with their spacious, well kept lawns and magnificent shade trees.

VIEW OF LAKE HOPATCONG, NORTHERN NEW JERSEY

Lake Hopatcong is the largest of the lacustrine bodies of New Jersey. It lies a thousand feet above the level of the sea, in a wide valley formed between the low mountain ridges that cross the northern counties. The lake is celebrated as a summer resort for the peolpe of Eastern cities. Its seventy miles of winding shore-line, often rugged in character and nearly everywhere forest-covered, are yearly the delight of visitors from many States.

Cities. Newark, on the Passaic River near its mouth, is a very important manufacturing city. It ranks first among the cities of the United States in the manufacture of fine jewelry; the tanneries of the State also are centered largely in Newark. Jersey City, on the peninsula which juts out between New York and Newark bays, forms the eastern terminus of the railways that leave New York for various points in the South or the West. Of the manufacturing centers within the State, it is second only to Newark in importance. Paterson, on the Passaic River where that stream descends in a cataract, has inestimable water-power The manufacture of silk products forms the distinctive industry. Other manufactures of importance are locomotives, mill machinery, and cotton and linen goods.

Camden is situated opposite Philadelphia. The railways which form a network of lines all over Southern New Jersey have their common center at this city. Trenton, the capital of the State, is on the Delaware. Iron and steel products form the most considerable division of the local manufactures, which include the making of pottery and of brick and tile products. Hoboken is in all commercial respects continuous with Jersey City. Elizabeth, on Newark Bay, has among its industrial plants the largest sewing-machine factory in the world.

OLD IRON FURNACE, NEAR GREENWOOD LAKE

New Jersey was one of the thirteen States which carried on the struggle for independence, and its resources of iron ore were of great value to the revolted colonies. Here and there in the mountain districts remain huge old furnaces that were centers of activity in the strenuous days of that period, but now stand deserted and silent amid the forest.

Historical. From 1623 to 1664 the territory now known as New Jersey was included in the Dutch colony of New Netherland. The Dutch West India Company built a fort on the Delaware River, opposite the present site of Philadelphia. Later the west bank of the Hudson was colonized, and in 1664, the year of the conquest of New Netherland, an English settlement was made on the site of the present city of Elizabeth. In 1667 emigrants from New Haven established another English colony at Newark. New Jersey was divided in 1676 into two provinces, East Jersey and West Jersey. In 1682 East Jersey was sold to William Penn and his Quaker associates. In 1688 the proprietary boards surrendered their rights to the Crown and the entire territory was for a time under the authority of Sir Edmund Andros, then Governor-General of New England. The two Jerseys were united in one province in the first year of the reign of Queen Anne (1702).

During the exciting and momentous events that led up to the Revolution, New Jersey played an important though not a leading part. In 1776 the inhabitants of the province declared themselves independent of British authority. In 1787 New Jersey ratified the Federal Constitution, being the third State to endorse that historic instrument and thus aid in the establishment of the new government.

PENNSYLVANIA

PENNSYLVANIA, one of the thirteen original States of the Union, has a total area of 45,215 square miles, 230 square miles being water surface. The State has no seacoast, but has a shore line of forty-five miles on Lake Erie. As throughout the Union, there is seen in Pennsylvania a steadily increasing proportion of city population. The urban population of the State, that is, those residing in cities of 4,000 inhabitants and over, constitutes over one-half the total population. The inhabitants of foreign birth form one-sixth of the whole population of the State, but in the large industrial centers the ratio is much greater.

THE CAPITOL AT HARRISBURG

The State capital was located at Harrisburg permanently in 1812, the town being then an important place on the highway leading to the western part of the State and more central than Lancaster, the previous home of the State government. The new edifice now used for the State offices was first occupied by the legislature in 1899. Its massive walls of granite and marble have impressive proportions and the interior is beautifully embellished with marble. Massive flights of stone steps lead upward to the entrances.

Mountains. The Mountain Division is a belt about seventy-five miles wide, that is formed by successive and generally parallel ranges and intervening valleys of the Appalachian System. The outer constituent ranges are the Blue or Kittatinny Mountains on the southeast and the Alleghenies on the northwest. The Blue Mountains enter the State from New Jersey. On the State boundary the Delaware River, with a depth of about sixty feet, passes through the picturesque Delaware Water Gap, between craggy peaks about 1,600 feet high. The Blue Mountains in Southern Pennsylvania are known as South Mountains. The range consists of gentle slopes rising to rounded spurs and knobs, everywhere covered with soil and clothed with forests or cultivated fields. At its highest point it rises 2,000 feet above the sea level.

PITTSBURG AND ALLEGHENY, FROM DUQUESNE HEIGHTS

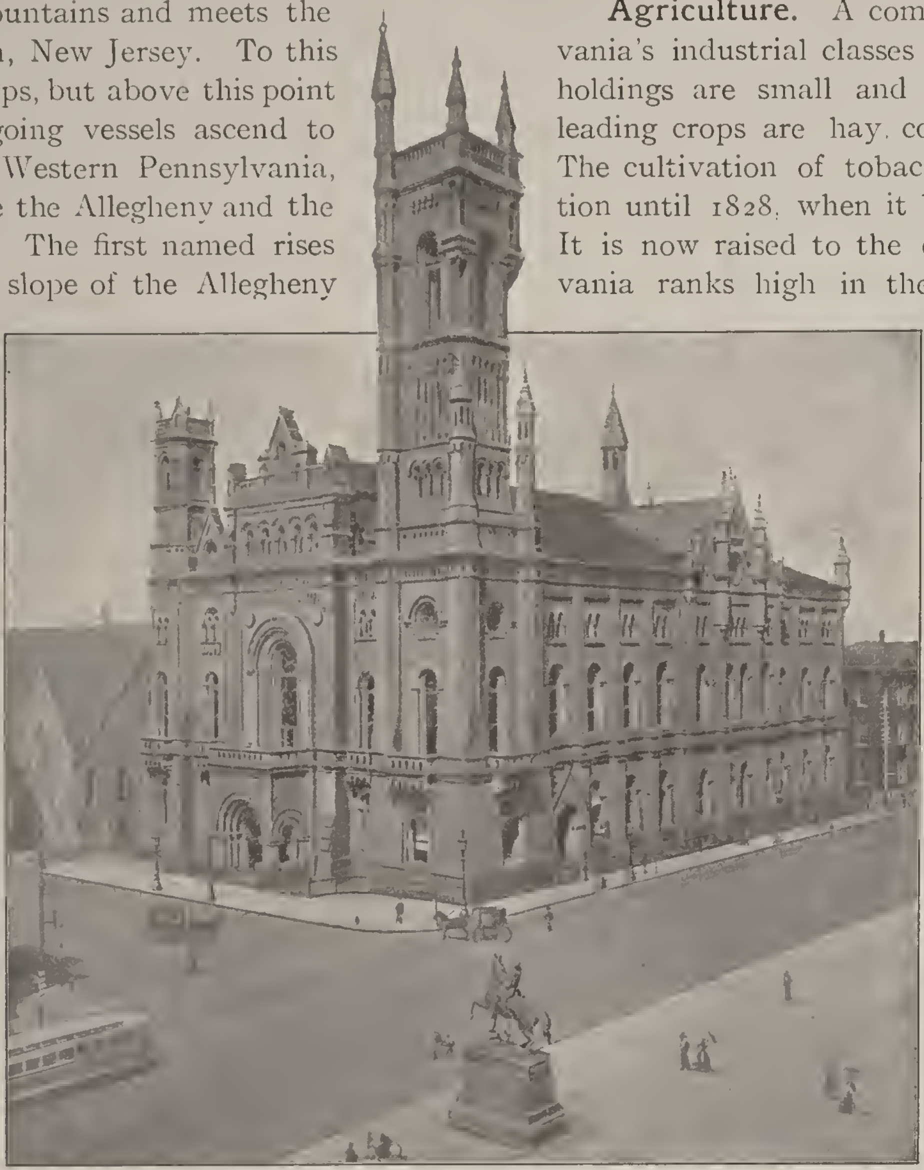
Above the meeting place of the waters which, united, form the Ohio River rises the steep slope of Duquesne Heights. From here is visible a great urban panorama, backed by swelling hills. From the right flows the Monongahela River, bearing scows laden with coal, and crossed by a suspension bridge. From the distance sweeps the great curve of the Allegheny. Between the two rivers lies the wide expanse of Pittsburg's industrial districts, while away to the left extends the neighboring city, Allegheny.

The Allegheny Mountains on the northwestern side of the Appalachian belt present a steep, rocky face to the southeast, but on the other side slope gently down to the Ohio and Erie table-lands. The elevation averages from 1,500 to 1,800 feet. They form a water-parting for the streams that flow into the Atlantic and those that find their way to the Ohio, but are crossed by the north and west branches of the Susquehanna River. West of the Alleghenies and upon the Ohio table-land are two well-defined but comparatively low chains running north and south, known as the Laurel Hill Range, and the continuous range of the Chestnut and Laurel ridges farther west.

Coal and Oil Fields. In Northeastern Pennsylvania the Alleghenies merge into the ridges that form the rim of the anthracite coal-fields. These great sources of wealth lie mainly between the Delaware River and the West Branch of the Susquehanna. The workings cover an estimated area of about 500 square miles. The region is watered by the Susquehanna, the Schuylkill, and the Lehigh rivers, and it is in the valleys of these streams that the rich anthracite coal deposits are found. It is in the Ohio and Erie table-land, which is north and west of the Appalachian belt and slopes toward the Great Lakes and the Mississippi, that the world-renowned oil-wells and the bituminous coal-beds are found. This area covers about 9,000 square miles, and its underlying wealth is beyond computation. Between 1850 and 1875 Pennsylvania was the only oil-producing State, but with the development of the oil industry of recent years in other States it has lost this monopoly In the oil area, however, great quantities of natural gas have been found. In the central part of the State is what is called the great limestone valley of Pennsylvania. East of the Alleghenies but little coal is found; the mountains cover the large coal areas, under which, everywhere, fire and brick clays are found.

Rivers. The Susquehanna is the principal river of the State in point of size, but is so much broken in its progress by rapids and bars as to give few of the advantages of a waterway without artificial aid. It rises in New York and, flowing southerly, empties into Chesapeake Bay. The Delaware, though rising in the Catskills in New York, may be regarded as belonging to Pennsylvania, since it receives its principal tributaries from the latter State. Flowing southward, the stream

cuts its way through the Kittatinny Mountains and meets the tide 130 miles from the sea, at Trenton, New Jersey. To this place the Delaware is navigable for sloops, but above this point are shoals and rapids. Large ocean-going vessels ascend to Philadelphia. The two great rivers of Western Pennsylvania, where the bituminous coal areas lie, are the Allegheny and the Monongahela, forming the Ohio River. The first named rises in Pennsylvania on the northwestern slope of the Allegheny Mountains, flows first north into New York, then re-enters Pennsylvania and flows southwest to its junction with the Monongahela at Pittsburg. It is 300 miles in length and is navigable for small steamers for about 200 miles. The Monongahela rises in West Virginia, and is about 300 miles in length. Through the aid of the National Government it has been made navigable into West Virginia by a series of great dams, about ten miles apart.



THE MASONIC TEMPLE, PHILADELPHIA

At Philadelphia, one of the earliest homes of masonic brotherhood in America, a splendid building has been erected for the lodges of the city. Within its walls are elaborate lodge-rooms and a great library. The temple, a notable structure of striking appearance, is built of granite and is of pure Norman architecture.

Climate, Flora, and Fauna. Few States have so wide a range of climate as Pennsylvania. The northern highlands of the State are buried under four or five feet of snow during four months of the year; the southern middle counties enjoy genial weather the year round, interrupted only by occasional intervals of severe heat or cold, which however rarely continue for more than three consecutive days; the midland valleys are unusually hot in midsummer and intensely cold in midwinter; and the southwestern counties of the State are comparatively dry, with an equable climate.

Vegetation varies with altitude and distance from the coast. Pine, walnut, hickory, oak, hemlock, and other trees are found, but the forests, once among the most important interests of the State, have been largely destroyed, owing to the rate at which the timber has been cut to supply the enormous demands made by railway and mining companies. Among plants of smaller growths, all the well known species of the Middle States are found. As to wild animals, the black bear and wild cat are still found in the mountain regions; but the panther and wolf, once common, are now extinct. Deer and the wild turkey are still hunted in remote districts, and the smaller wild animals, with numerous birds, are common in all but the thickly settled areas. The streams of the State generally are well stocked with fish.

Agriculture. A comparatively small proportion of Pennsylvania's industrial classes are engaged in agriculture. The land-holdings are small and usually worked by the owners. The leading crops are hay, corn, oats, wheat, potatoes, and tobacco. The cultivation of tobacco in Pennsylvania received little attention until 1828, when it began to be of commercial importance. It is now raised to the extent of millions of pounds. Pennsylvania ranks high in the production of apples. Other orchard products and small fruits are grown successfully and with profit. Market-gardening and floriculture are important sources of revenue and large nurseries are numerous throughout the State. Dairying also has come to be a most important and reliable industry, the average annual value of the butter and cheese produced being enormous.

Mineral Resources. Anthracite coal was first discovered in Pennsylvania in 1768, but the first shipment of coal from the State was not made until 1820. After the opening of the anthracite region by canal and railway the production increased with great rapidity. In the yield of both anthracite and bituminous coal Pennsylvania has ranked first, always mining at least 50 per cent of the total product of the United States.

Petroleum was long known to the Indians of the Allegheny; the oil having forced its way through the porous rock above it, floated upon the surface of the stream, and was gathered by them and sold as "Seneca oil." It was not until 1859, however, that it was known to exist in subterranean reservoirs. The interest aroused by this discovery was intense, the excitement resembling that caused by the discovery of gold in California. There was a great rush to the oil-fields, and fortunes were made in a day. The excitement passed, but the yield of oil has been continuous.

Closely associated with petroleum is natural gas of which the

RIDGEWAY BRANCH, PUBLIC LIBRARY

Since the days of Franklin the city of Philadelphia has been famous for its libraries. Among them the one called the Ridgeway Branch of the Public Library is celebrated among scholars for its wealth of rare and costly books relating to the history and geology of the United States.

coal region of Pennsylvania has been so productive that its use for domestic and manufacturing purposes for a time superseded that of coal. The largest fields of natural gas are found in the northwestern and southwestern portions of the State.

Pennsylvania produces a very large proportion of the commercial grades of stone, ranking first in the value of slate and limestone and third in sandstone. Two-thirds of the slate output of the United States is taken from the quarries of Pennsylvania, the product being largely used for roofing.

VIEW OF THE SCHUYLKILL, FROM FAIRMOUNT PARK

Fairmount Park, in Philadelphia, is one of the famous parks of America. For nearly a century the city has been extending the bounds of the five-acre tract which was the nucleus of the great pleasure-ground, absorbing miles of woodland and many a celebrated estate. The Schuylkill River traverses the park, and along its banks extend boulevards that afford views of surpassing beauty. In this part, also, the Schuylkill is a favored haunt of oarsmen.

Manufactures. Among the industrial States of the Union, Pennsylvania ranks second, being exceeded only by New York in the value of its manufactured products. Among the first Bessemer rails to be rolled in the country were those turned out in 1867 by the Cambria Iron Works at Johnstown. Pennsylvania has since become one of the largest manufacturers of Bessemer steel in the world.

The advancement in the textile manufactures of the State has been very pronounced. Among the Middle States, Pennsylvania leads in the manufacture of cotton, and exceeds all others in the woolen industries. As early as 1850 it was conceded that Philadelphia had the largest number of textile factories of any city in the world. During recent years there has been pronounced activity in the production of silk, more than fifty Pennsylvania cities and towns having silk factories. A large amount of capital is also employed in the building of railway cars and locomotives, the manufacture of machinery of various kinds, glass, and hardware. In making of coke and also of carpets the State holds the highest rank.

IN THE PETROLEUM FIELDS OF PENNSYLVANIA

Typical among the industrial scenes of the Keystone State are those of the oil-producing regions of Western Pennsylvania. Over the areas that are known to be underlaid by oil-bearing rocks the work of development has been carried on vigorously. In some sections the natural scenery has given place to a forest of derricks indicating the locations of oil-wells.

Cities. Philadelphia is the second city in the United States in wealth and the third in manufacturing. The present boundaries embrace 130 square miles, chiefly between the Delaware and Schuylkill rivers. Among the reminders of Revolutionary times, standing in Philadelphia, are the old State House, or Independence Hall, and Carpenter's Hall, where the first Congress of the United Colonies met. Harrisburg, the capital, has a commanding position on the Susquehanna River, is a railway center of considerable importance, and has large manufacturing interests.

Pittsburg, next to Philadelphia in population and importance, is situated at the junction of the Allegheny and Monongahela rivers. It is one of the most extensive freight and manufacturing centers in the country, the basis of its prosperity being the immense quantities of coal and natural gas in the vicinity. Pittsburg and Allegheny, the latter city being on the opposite side of the Allegheny River, have the largest aggregation of iron, steel, and glass industries in the country.

Scranton, surrounded by the anthracite coal-fields of Northeastern Pennsylvania, is the fourth city in size, a prominent railway point, and one of the largest coal-mining centers in America. Reading, on the Schuylkill River, besides being an important railway, mining, and agricultural center, contains about one thousand manufacturing establishments. Erie, a port of entry, situated on a fine land-locked harbor of Lake Erie, has a large lake trade in coal, oil, iron ores, lumber, and flour. Wilkesbarre, an important railroad junction, is the center of a rich anthracite coal region, and has extensive manufactories.

THE HISTORIC CHEW MANSION, IN GERMANTOWN

Historical. The Delaware colonies, first founded by the Swedes, came under the rule of the Dutch of New Amsterdam, and when, in 1664, the country was seized by the English, the territory became the property of the Duke of York. William Penn's charter, obtained in 1681, covered substantially the present States of Pennsylvania and Delaware. Under his proprietorship a provincial form of government was established, and the liberal plan of his colony drew thousands of settlers thither. In 1682 Philadelphia was founded. In 1699 Pennsylvania and Delaware were given separate legislatures, but had a common Governor, a condition that continued until 1776, when Pennsylvania set aside the proprietary government and adopted a State constitution which was in force until 1790. During the great wars between France and England (1746–60) Pennsylvania became one of the battle grounds of that struggle. In 1755 occurred Braddock's defeat near Pittsburg.

Owing to the central situation of Philadelphia, it was the place of meeting of the first Continental Congress. The Declaration of Independence was adopted there, and the Congress continued to meet there until the city was captured by the British in 1777. During the Revolution the State suffered from Indian attacks, and the Wyoming Massacre of 1778 is a bloody landmark of history

The Congress of the United States assembled in New York in 1789, but in December, 1790, the place of meeting was changed to Philadelphia. That city remained the capital of the United States until 1800, when the seat of government was permanently fixed at Washington. In 1794 occurred the so-called "Whiskey Rebellion" against the Federal excise in Western Pennsylvania. It is important chiefly as the first test of Federal power to coerce opposition to Federal laws. During the Civil War Pennsylvania was the only Northern State invaded in force. One of the bloodiest and most decisive battles of the war was fought on her soil at Gettysburg in 1863.

MARSHALLS FALLS, MONROE COUNTY

Marshalls Creek, in Monroe County, in the extreme eastern portion of Pennsylvania, is a small stream that finds its way from high ridges to the waters of the Delaware River. Traversing a broken and rocky country, it winds through valleys and ravines the beauty of which has attained more than local celebrity. Near Marshalls Creek station the stream forms a picturesque cataract, its attractiveness heightened by the rugged character of its surroundings.

DELAWARE AND MARYLAND

DELAWARE

DELAWARE is one of the thirteen original States of the American Union. Its area comprises, approximately, 2,050 square miles, of which ninety square miles are water surface. The foreign born element constitutes seven per cent, and the colored element one-sixth of the total population

Surface Features. Delaware forms the northern portion of the peninsula between Chesapeake Bay, the Delaware River, and the Atlantic Ocean. There are no mountains in the State, but in the north the surface is picturesquely diversified by hill and dale. South of Christiana Creek the surface is almost a perfect level, varied only by a low table-land or sand-ridge that rarely attains a height of 100 feet, crossing the State from north to south and forming the watershed of the peninsula. This elevation is largely wooded and abounds in swamps from which almost all of the streams take their rise. The Delaware is the only river of importance. Within the limits of the State the most important streams are the Brandywine and Christiana creeks. The latter is the only navigable stream in the State admitting ocean vessels. In most sections of the State the climate is mild throughout the year, and the elevated districts in the north are remarkably salubrious. The flora and fauna of Delaware are such as are common to this section of the Atlantic seaboard generally.

THE DELAWARE STATE HOUSE AT DOVER

The Delaware legislature removed the State capital from Newcastle to Dover in 1777, probably to secure a home less exposed to British attack, and here it has remained through all succeeding years. About 1788 the present State House was built, being used also as a county court-house until 1873, when the State government took full possession and remodeled the building.

Resources and Industries. Of the products of the soil, the most considerable crops, in the order of their importance, are corn, wheat, hay, vegetables, and fruits. Among vegetables, tomatoes form the bulk, these often far exceeding in value all the orchard products. Much attention is also given to the cultivation of flowers, plants, and vegetables that require nurture under glass. Delaware is one of the States that supply the markets of New York and Philadelphia with orchard and small fruits. The fisheries form one of the most important industries in the State, their commercial products are principally oysters and shad.

Iron and steel industries, among which are shipbuilding and the making of machinery and railway cars, comprise more than three-tenths of the value of manufactured products. There is a great and rapidly increasing activity in the tanning, currying, and finishing of leather. In Wilmington is located one of the largest morocco leather plants in the world. The Dupont gunpowder mills, a few miles outside that city, are the largest in the country. Food preparations, such as flouring and grist mill products and canned fruits and vegetables, have an enormous annual value.

Cities. Wilmington is the metropolis of the State. It is a port of entry, situated on Christiana Creek about two miles above its confluence with the Delaware River. The falls of the Brandywine afford excellent water-power. The principal manufactures are street and steam railway-cars and cotton and leather goods. There are also flouring and saw mills and factories for the making of carwheels and paper. The iron and steel industry, including bridge building and the building of iron ships, is active. Dover, the capital, is noted for its canning factories. Newcastle, a port of entry, contains cotton and woolen factories, shipyards, rolling-mills, and steel-works.

PICKING STRAWBERRIES NEAR SEAFORD, DELAWARE

Delaware long has been famous for its peaches, and of late years apples, pears, plums, and strawberries have been grown in increasing quantities. In the southern part of the State below Middletown the soil is sandy, with here and there outcrops of loamy clay. This district is admirably adapted to the culture of strawberries, and from it the fruit is shipped annually to the large Eastern cities by carloads. Seaford is a shipping point in the midst of almost level and very productive farm lands.

Historical. The State was colonized temporarily by Dutch in 1631 and permanently by Swedes in 1638. The Dutch seized the river in 1855 but in 1664 came English conquest, and in 1683 absorption into Pennsylvania. From 1702 the colony had a distinct legislature but was under the Pennsylvania executive. Delaware declared independence in 1776, but later was the first State to ratify the federal constitution.

MARYLAND

Maryland, one of the thirteen original States of the American Union, has a total area of 12,210 square miles, of which the land surface is only 9,860 square miles. Of the total population, the foreign-born inhabitants constitute only seven per cent, while those of the colored race form about one-fifth of the whole.

Surface Features. The Coastal Plain of Maryland forms the eastern part of the State, a region characterized by broad, level tracts rising gradually from an elevation but slightly above sea-level to heights of 300 feet or more on its western border. The Eastern Shore is in general below twenty-five feet in height, although at the extreme north it attains an elevation of 100 feet. The section lying to the west of the Chesapeake Bay is of higher elevation.

From the western limit of the Coastal Plain to the base of the Catoctin Mountains in Frederick County extends the Piedmont Plateau, a region broken by low, undulating hills. This plateau embraces more than one-fourth of the land area of the State. The Appalachian region forms the western part of Maryland and is traversed by a series of parallel mountain ranges of which many exceed 2,000 feet and some reach 3,000 feet in height. In the east rises the Blue Ridge of Maryland, which reaches at one point an elevation of about 2,400 feet.

The principal rivers in Eastern Maryland are the Pocomoke, the Nanticoke, the Choptank, the Chester, and the Elk. The Potomac, the Patuxent, the Patapsco, and the Susquehanna rivers empty into the Chesapeake Bay on the west. In the extreme west is the Youghiogheny River. The Potomac, the most important river in the State, is formed near Cumberland. At Georgetown in the District of Columbia the river meets the tide and just below that point expands into a broad estuary. The length of the Potomac is estimated at 400 miles, and the largest vessels ascend to Washington. The Youghiogheny River joins the Monongahela River in Pennsylvania.

The most important waterway in Maryland, and the longest and broadest inlet in the United States, is Chesapeake Bay. Its length is approximately 200 miles, its width varies from four to forty miles, and its depth is sufficient to admit of the passage of vessels of the heaviest tonnage almost to the mouth of the Susquehanna.

Climate, Flora, and Fauna. The climate of Maryland in general is mild and equable, and in most places it is healthful, although the lowlands bordering the bay are somewhat miasmatic.

The flora of the State differs little from those of the adjacent Commonwealths. The common forest trees, as the oak, hickory, chestnut, and pine, grow throughout the State. Indigenous wild

THE STATE HOUSE AT ANNAPOLIS

The royal governor of Maryland removed the capital from St. Marys to the more central site of Annapolis in 1695. The present State House, erected to take the place of an older building abandoned in 1769, is the only colonial State House that still serves an American commonwealth.

BURNSIDE'S BRIDGE AND ANTIETAM CREEK, NEAR SHARPSBURG

In the days when the Republic was rent by civil war, Southern forces crossed the Potomac and marched northward into Maryland. At Antietam Creek they were met and turned back by the Federal armies. In the battle which checked their course one of the vantage points was Burnside's Bridge, the possession of which was hotly contested.

WATER FRONT AND OLDER BUILDINGS OF THE UNITED STATES NAVAL ACADEMY AT ANNAPOLIS

The Naval Academy at Annapolis, maintained by the United States Government for the training of officers of the navy, corresponds in character to the military school at West Point. The Academy grounds are situated on the River Severn, and although lacking in picturesqueness, are attractive and convenient. Here are moored the training-ships and other vessels used for purposes of naval instruction. Within the past few years the older buildings of the Academy, some of which were built in colonial times, have been superseded in part by splendid new structures.

fruit are the Chickasaw plum, the persimmon, and the service-berry. The native fauna is generally that common to the eastern slope of the Appalachian Range. Deer and black bears are found occasionally in the more remote regions. Of the birds, the Baltimore oriole is the best known. The State is famous for its fish.

THE CABIN JOHN BRIDGE, NEAR WASHINGTON

From the Great Falls of the Potomac, a number of miles above Washington, a stone conduit brings water to the city, a great part of its length lying outside the limits of the Federal District. At Cabin John Run, a little stream that joins the Potomac from the north, the conduit leaps across the ravine on a single great arch, whose immense span of 220 feet is believed to be unequalled elsewhere.

Resources. On the Eastern Shore truck-farming, dairying, and horticulture are remunerative; crops of secondary importance are corn, wheat, oats, and hay. Southern Maryland produces mainly tobacco, wheat, vegetables, and fruits. The soil of Northern Central Maryland yields wheat, corn, and hay in abundance, and the farmers of that district devote much attention to dairying. In Western Maryland, which occupies the Appalachian region, wheat, corn, hay, and peaches are the principal products, and stock raising is largely pursued. As in other States, dairying is becoming year by year a more profitable industry.

The fisheries of Maryland have contributed more than aught else to its fame. The Chesapeake Bay is the largest natural oyster-producing area in the world, and crabs, clams, and shrimps also are taken on an extensive scale. Terrapin, for which the State has long been famed, are decreasing in number.

The mineral deposits of Maryland exhibit a wide range and form an important source of its wealth. The western part of the State has extensive deposits of bituminous coal of good quality. In both the central and western parts granite, sandstone, slate, marble, and limestone are found, and along the western edge of the Coastal Plain are valuable clays, marls, and building sands.

THE COURT-HOUSE, BALTIMORE

Among the striking buildings of the Maryland metropolis is the court-house, occupying a whole square on a sloping site that affords street entrances to different floors. It is built of white marble, in the classic renaissance style, and has that effect of massiveness which is so characteristic of public buildings in this city. In its interior are some splendid mural paintings.

Manufactures. Iron and steel products hold an important place among Maryland manufactures. Much of the ore used is imported, but the necessary coal and coke are largely obtained in the State. The building of iron and steel ships is an allied industry of importance Next among the leading manufacturing interests stands the canning and preserving of fruits, vegetables, fish, and oysters, by far the most important section of this industry being the canning of fruits and vegetables. The peaches, tomatoes, pears, peas, corn, apples, and pineapples packed in Maryland are shipped to all parts of the country. The lumber industry, centered principally in Baltimore, and the manufacture of tobacco, are important.

Chief Cities. Baltimore, the largest city of Maryland, is on the Patapsco River. It has a large harbor, with both an outer and an inner basin. The city moreover, not only enjoys a practical monopoly of the Maryland lumber trade, but is a great lumber emporium to which are shipped the pines and hardwoods of other States. Baltimore is also the principal center for the fishery interests.

Cumberland, on the Potomac River, has extensive manufactures of brick, cement, flour, iron and steel, and leather and is an important center of distribution for lumber, coal, and farm products. Hagerstown, situated in the mountain region, is a flourishing manufacturing community. Frederick is important as a center of trade and as the seat of Frederick College. Annapolis, the State capital, is chiefly known as the seat of the United States Naval Academy.

Historical. Maryland was founded as a proprietorship under a charter granted to Cecil Calvert, Lord Baltimore. Lord Baltimore sent out a body of colonists under charge of his brother, Leonard Calvert, and in 1634 they made the first important settlement in the territory, at a point on the St Marys River. Previous to this a trading post had been established by London men through their agent, William Claiborne of Virginia, on Kent Island in Chesapeake Bay. In 1688, the Protestant colonists objecting to a Catholic Governor, Maryland was made a Crown Colony. In 1714, however, Lord Baltimore, a Protestant, was recognized as the proprietary. From this time until the American Revolution the province was ruled by the Baltimores. In the War of 1812 Maryland was prominent, especially by reason of the efficiency of the privateers that sailed from Baltimore. Marylanders sympathized with the South in 1861 but did not secede.

THE BATTLE MONUMENT, BALTIMORE

To the memory of those who fell in battle while protecting the city from British attack in 1814, the people of Baltimore erected a monument in the succeeding year. Upon the column are inscribed the names of the fallen, and the summit of the shaft, a space of forty feet above the pavement, is surmounted by an emblematic figure representing the city.

DISTRICT OF COLUMBIA

THE DISTRICT OF COLUMBIA, containing Washington, the capital city of the United States, is situated on the eastern bank of the Potomac River. The District was originally a part of the State of Maryland, and it is now bounded on three sides by that State, while on the fourth, along the southwest line, the edge of the Potomac River separates it from Virginia. It embraces an area of seventy square miles, of which ten square miles is water surface, the waters of the Potomac not being shared with Virginia. The District is at the head of navigation on the Potomac River and is about 200 miles from the ocean by way of the river and Chesapeake Bay.

THE EAST FRONT OF THE CAPITOL

The great Capitol, where the nation's life is centered, is an impressive sight from whatever point it may be approached. On its western front, overlooking a broad plaza, is the wide portico where the presidents have been inaugurated since the time of Jackson. The eastern front has less significance.

Surface Features. The surface of the District is undulating, with several steep elevations of no great altitude. Within the limits of the District are Rock Creek and the Anacostia River, known locally as the Eastern Branch, both affluents of the Potomac River. The former rises in Montgomery County, Maryland, and flows southward, entering the river between Georgetown and Washington. South of Washington proper the Eastern Branch flows into the Potomac. Neither of these streams is of commercial importance. The Potomac River, where it enters the District, is a narrow stream flowing through a ravine-like valley bordered by low bluffs. Below the mouth of Rock Creek the river spreads out into a wide expanse, edged by hills on the Virginia side, but on the District side marked by a great mud-bank, the Potomac Flats.

The city of Washington is located in the angle between the Potomac River and the Eastern Branch, occupying about one-sixth of the land area of the District. In the western part of the urban district lies West Washington, better known as Georgetown, once a distinct municipality. Around Washington extends a belt of two to three miles width that contains parks, farms, country houses of city residents, and suburban settlements. Rock Creek Park, in the northern corner of the District, is a piece of wild and broken land of much scenic beauty. Railroads cross the District in every direction, converging at Washington. From Georgetown the old Chesapeake and Ohio Canal parallels the river westward.

THE SENATE CHAMBER

In the north wing of the Capitol is the Senate Chamber, a great hall lighted from a beautifully decorated glass ceiling and nearly filled by the desks of the legislators. Around the chamber extend the various galleries from which the Senate proceedings may be observed by visitors.

THE LIBRARY OF CONGRESS

The Congressional Library, built of New Hampshire granite, is a beautiful piece of architectural work. The general effect of the exterior is that of massiveness. In its interior finish the building is by far the most splendid structure of the capital city. At every turn exquisite carvings, variegated marbles, or masterpieces of painting and mosaic meet the eye, while its wealth of books and manuscripts are invaluable treasures to the scholar.

City of Washington. The site of Washington was artistically laid out with a view to the future greatness of the city. The plan, which was approved in August, 1791, was the work of Pierre Charles L'Enfant, a French engineer of remarkable ability. Taking Capitol Hill as a center he laid down streets running due north, east, and south, to be called respectively North Capitol, East Capitol, and South Capitol streets. Theoretically there is a West Capitol Street, but as it would trend through the Capitol grounds and the Mall it does not appear under that name. These "Capitol" streets divide the city into

four sections, unequal in area, known as the Northwest, Northeast, Southwest, and Southeast quarters. Streets parallel to the Capitol were laid down crossing each other in the conventional gridiron pattern, those running east and west being distinguished by letters of the alphabet and those north and south by numerals.

The distinctive feature of L'Enfant's scheme was in the great diagonal avenues, named for the different States, which, intersecting each other and the rectangular streets at frequent intervals, provide extended vistas in all directions. The artistic effectiveness of L'Enfant's plan was largely obscured during the period of the city's growth, when the too-apparent contrast between the liberal allotment of space and the paucity of urban effect earned for the capital the humorous title of "City of Magnificent Distances." Under President Grant began a series of thorough-going improvements, and the natural growth of population and business has largely filled out L'Enfant's plan. Proposed improvements of the next few years will make the city one of the most beautiful of the world's great capitals.

THE STATE, WAR, AND NAVY BUILDING.

A massive pile of granite, whose huge proportions seem not out of place where great open spaces lie around it, stands west of the White House. It contains the great departments dealing with foreign, military, and naval affairs and is, next to the Treasury Building, the most important departmental structure. On the south front the State Department has its entrance.

Public Buildings. The most imposing of the public structures in the District of Columbia is the Capitol, devoted to the uses of the legislative and judicial branches of the national government. It is situated on an eminence, seventy-two feet above tide-water, and consists of an older part called the Center Capitol, with two great wings usually called the northern and southern extensions. Surrounding the great building is a park comprising forty-six acres of beautifully arranged grounds, that are handsomely adorned with trees and shrubbery. The "White House" or Executive Mansion, the home of the President, completed in 1800, stands on a tract of ground about eighty acres in extent sloping down to the Potomac Flats. In the building called the Executive Offices, erected adjacent to the White House, the President receives persons for consultation on public business. The office building, which harmonizes in style with the White House, occupies a part of the White House grounds.

THE NORTH FRONT OF THE WHITE HOUSE

The White House is approached from the north, the entrance being through the portico added to the original building during Jackson's time. During President Roosevelt's administration the White House was remodeled and enlarged, but the characteristic features of the structure were retained, and the more famous apartments of the interior are much as before.

The Treasury Building, an immense edifice in the classic style of architecture, adjoining the White House grounds, is the home of the department which conducts the financial operations of the National Government. On the opposite side of the White House grounds is the State, War, and Navy Building, a single structure, which gives quarters to the three departments mentioned. The Interior Department has its home in another great building of classic style, popularly known as the Patent Office, from the principal bureau of the department there located. A new edifice, to be located in the Mall, will be occupied by the Department of Agriculture. On Pennsylvania Avenue is the great Post Office Building, which is at the same time the city post office and the home of the Post Office Department of the General Government. There are no special buildings, as yet, for the departments of Justice and of Commerce. Distinct buildings are occupied by the Pension Bureau and by the Census Bureau, both of which employ an enormous number of clerks and require an unusual amount of space.

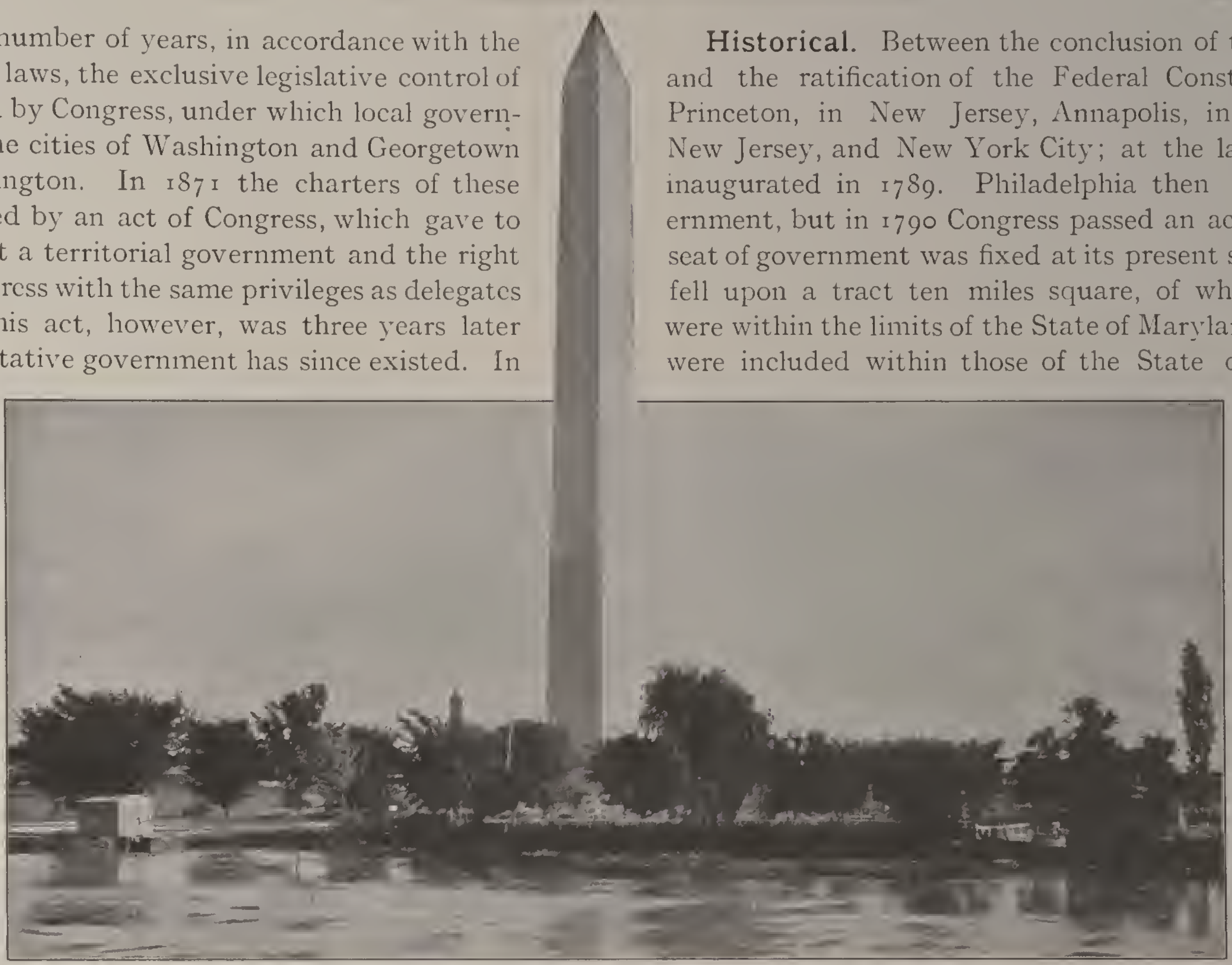
STATUARY HALL, IN THE CAPITOL

To the south of the great rotunda of the Capitol is the chamber once used by the House of Representatives, but since 1857 superseded by the larger assembly room in the same wing. The old chamber, now known as Statuary Hall, contains memorial statues representing famous men of the various States by which the statues were presented.

Not less important than the department buildings are the legislative buildings which will form, when completed, a group around the Capitol grounds. The Congressional Library is one of these. An office building for the House of Representatives is in course of erection near the south bounds of the Capitol grounds, and a similar edifice for the Senators will be built later near the north side of the grounds. The space in these office buildings will be devoted to committee rooms and to private offices.

Three great workshops belonging to the government also have buildings devoted to their special needs. They are the Government Printing Office, an enormous publishing house for the printed matter of the government; the Bureau of Engraving and Printing, where paper money and postage stamps are made; and the Gun Shop of the Navy Yard, where naval ordnance is finished or repaired.

Government. For a number of years, in accordance with the Constitution and Federal laws, the exclusive legislative control of the District was exercised by Congress, under which local governments were formed for the cities of Washington and Georgetown and the county of Washington. In 1871 the charters of these corporations were repealed by an act of Congress, which gave to the people of the District a territorial government and the right to elect a delegate to Congress with the same privileges as delegates of other Territories. This act, however, was three years later repealed, and no representative government has since existed. In 1878 another act was passed which is still in force. This act provides for the management of District affairs by a board of three commissioners, appointed by the President, with the consent of the Senate. Two of these commissioners are selected from civil life, and the third is an officer detailed from the Engineer Corps of the Army. These commissioners are vested with legal authority covering all the ordinary features of municipal administration. There is no local legislative body representing the residents of the District, but the popular voice can make itself heard when desirable, through petition or remonstrance. The administration of the urban portion of the District is much the same as in cities of the various States. Local courts exist under the federal laws. The expenses of government are divided equally between the people of the District and the General Government of the United States, that is, Congress appropriates one-half the requisite sum while the other moiety is raised by proportional contribution levied and assessed upon all taxable property and privileges in the District not possessed by the Federal Government. Residents of the District are in the same position in regard to presidential elections as are residents of Western Territories, and can exercise the voting franchise only by retaining nominal residence within the limits of their home States, if they possess such.



THE WASHINGTON MONUMENT, FROM THE POTOMAC FLATS

South of the "White Lot," as the park directly behind the White House is called, rises the Washington Monument, a great rectangular obelisk of marble which dominates the entire city and is visible for many miles beyond the city limits. It perpetuates the memory of the first president of the Republic, and its construction was aided by individual citizens during the period of its erection, from 1848 to 1884. The monument is 555 feet in height, resting on a base only 55 feet square.

Historical. Between the conclusion of the War for Independence and the ratification of the Federal Constitution, Congress met at Princeton, in New Jersey, Annapolis, in Maryland, Trenton, in New Jersey, and New York City; at the last place Washington was inaugurated in 1789. Philadelphia then became the seat of government, but in 1790 Congress passed an act by which the permanent seat of government was fixed at its present site. Therefore, the choice fell upon a tract ten miles square, of which seventy square miles were within the limits of the State of Maryland and thirty square miles were included within those of the State of Virginia. The seat of government was transferred to the District on "the first Monday of December, 1800," but Congress had met there November 21, 1800. The President arrived in Washington June 4, 1800, and the United States Supreme Court held its initial session there February 4, 1801. In 1846 the District was reduced to its present dimensions by the recession to the State of Virginia of the portion situated on the west side of the Potomac River. The tract now forming the District was already well settled when taken by the Federal Government, Georgetown being a commercial port receiving freight from the interior, but the growth of the capital city was slow. In 1814, when captured and burned by the British, it was but a straggling settlement. During the War of Secession the city became a great military depot where much business was done. In 1864 it narrowly escaped capture by Southern forces. The building of railroads has done much for the growth of the District. Besides holding place as a great center of official life, the city has distinct advantages for residence, and there is now a decided trend toward making it a great educational center. Fortunately for the beauty of the city no large manufacturing plants have been established in the District, owing to the lack of natural resources to sustain them, and an equal lack of exceptional shipping facilities for any products that might be made.

PENNSYLVANIA AVENUE, FROM THE TREASURY BUILDING

Pennsylvania Avenue, four miles in length, extends from the heights of Georgetown to the Navy Yard, but is interrupted by the Capitol grounds and by the large park-like area upon which stands the White House. The mile-long stretch of Pennsylvania Avenue between the White House and the Capitol has been the line of march for most of the inaugural parades.

OLD ST. JOHN'S CHURCH, IN GEORGETOWN

VIRGINIA AND WEST VIRGINIA

VIRGINIA

VIRGINIA is one of the thirteen original States and the southernmost of the Middle Atlantic States. Its total area is 42,450 square miles of which 2,325 square miles are water surface. In common with the Southern States, Virginia has been little affected in recent years by the influx on American shores of natives of the Old World. Those of foreign birth constitute but one per cent of the total population of the State; the colored element forms more than one-third of the whole.

General Features. Considered as to its physical detail Virginia falls naturally into six great divisions. The first division, known as the Tidewater Country, comprises the coastal plain, about ninety miles wide, with an area of about 11,000 square miles. The second division, called Middle Virginia, contains some 12,000 square miles. The Piedmont Plateau is a hill country from 300 to 1,200 feet in elevation, lying east of the Blue Ridge Mountains, and stretching southwestward from the Potomac River about 250 miles. The Blue Ridge country, including the mountain range of that name, presents a varied landscape of much grandeur. The culminating height of the Blue Ridge, Rogers Mountain in Grayson County, 5,719 feet, is the highest peak in the State. The Valley of Virginia is comprised within that section of the Appalachian Plateau that adjoins the Blue Ridge Mountains on the southeast and, on the northwest, has parallel and interrupted ranges such as the North and the Shenandoah mountains. The valley extends to the Tennessee line and it comprises in the State an area of about 5,000 square miles. The Appalachian Country is a mountainous section adjoining the Valley of Virginia on the west. It is traversed by the long, narrow, and parallel mountain ranges of the Alleghenies.

Rivers. In Virginia the large rivers flowing into the Atlantic Ocean drain six-sevenths of the State, the remainder being drained into the Ohio River. The Potomac River, wide and deep, forms the northeastern boundary, but is not within the State. The Rappahannock River, rising in the Blue Ridge, flows into Chesapeake Bay, and is navigable to Fredericksburg, ninety-two miles from its mouth. The York River extends for more than forty miles from the bay. In extent of drainage area, the James River, navigable to Richmond, has no equal in the State. Its tributaries draw waters from every division of Virginia. The Elizabeth River is a broad inlet from the Hampton Roads estuary of the James, extending southward twelve miles and forming at its head the excellent harbors of Norfolk and Portsmouth. Of the rivers draining ultimately into the Mississippi the chief are the Kanawha, the Holston, and the Clinch.

The great Dismal Swamp extends about forty miles south from Norfolk into North Carolina. In the center, occupying the highest

THE CAPITOL AT RICHMOND

To secure immunity from British attack the State capital was removed from Williamsburg to Richmond in 1780. Here, in 1796, was erected the present State House, which was, in 1861-65, the official center of the Southern Confederacy.

CAPITOL SQUARE, RICHMOND

Around the old State Capitol at Richmond extends the beautiful expanse of Capitol Square, embracing several acres of land. Shaded walks radiate from a great circle in which stands Crawford's celebrated bronze equestrian statue of Washington. At the east end of a broad avenue is the Executive Mansion, and not far away is located the splendid City Hall.

ARLINGTON HOUSE, NEAR WASHINGTON

The former mansion of the great Confederate general, Robert E. Lee, stands within the limits of Arlington National Cemetery, across the Potomac from Washington. The pillared portico is plainly visible from the capital city. Around the mansion lie the acres of the old estate, now the last resting place of vast numbers of soldiers of the Civil War.

part of the swamp, twenty-two feet above the mean tide level, is Lake Drummond, the only considerable lake in the State.

Climate, Flora, and Fauna. Virginia has a remarkably salubrious and delightful climate, the winters being short, approaching severity only in the mountains. The average annual temperature is 56°. Although the temperature ranges from –6° to 102°, changes in the weather are neither sudden nor severe. Moisture is abundant, but not excessive. The annual rainfall is well distributed throughout the seasons. The snowfall is light, often being insignificant.

Extensive forests of cypress, juniper, short-leafed pine, cedar, and like trees are found in the eastern and central part of the State, while hickory, hemlock, sycamore, chestnut, and other trees are found in the mountain districts. Sugar maples are common and nuts of various kinds, as well as fruits, are found in nearly all parts.

Deer, wildcats, and red, black, and gray foxes are occasionally found, and smaller wild creatures are numerous. Black bears are occasionally met in the Appalachian ranges and in the Great Dismal Swamp. Feathered game is abundant, especially water-fowl, while fish and shell-fish of many kinds are found in the streams and on the coast.

WILLIAM AND MARY COLLEGE, WILLIAMSBURG

The second oldest college in the United States is located at Williamsburg, Virginia, and still bears the names of the English sovereigns by whom it was chartered in 1693. The college possesses many reminders of colonial times. Directly in front of its principal building is the statue of Lord Botetourt, one of the royal governors of Virginia, to whom the college owes kindly memories for his benefactions.

Historical. The settlement established by the Virginia Company at Jamestown, May 13, 1607, was the first permanent English colony

WESTOVER, A FAMOUS COLONIAL HOME

The Westover mansion is one of the historic homes of Virginia. Here resided the famous William Byrd, who was a high official in colonial times and lived in lordly state befitting his wealth and social rank, but is best remembered now for his writings that portray Virginia society in his day. The mansion is situated some miles from Richmond.

on the mainland of North America, and in 1619 Governor Yeardley called together at Jamestown the first legislative body convened in North America. The English government deprived the Virginia Company of its charter in 1624 and Virginia became a royal province. In 1744 Virginia purchased from the Six Nations the right to make settlements as far west as the valley of the Ohio River. Then followed various French and Indian wars, notwithstanding which the colony continued to grow populous and wealthy. In the Continental Congress of 1776 the Declaration of Independence was proposed by Virginia delegates. It was at Yorktown that Cornwallis and his army surrendered on October 19, 1781.

In 1861 Virginia cast its lot with the Confederacy of the Southern States. Richmond was the capital of the Confederacy and the geographical position of the State made it one of the chief battle grounds of the war between the States. The last battle of the war was fought at Appomattox, April 8, 1865, and it was there that Lee's army surrendered A new State constitution, abolishing slavery, was ratified in 1869, and Virginia resumed its old status as a member of the Union.

Resources and Industries. Agriculture continues the chief industry of Virginia despite the rapid development of coal-mines and other mineral resources. The most valuable crop is corn, and other important grains are wheat and oats. Irish potatoes are a staple crop, the quality being superior, and sweet potatoes are grown almost anywhere. Of all the States, Virginia now ranks third in tobacco production. Virginia ranks first among the States in the production of peanuts, which are extensively cultivated. Cotton is grown as a staple crop in the southeastern counties.

Commercial fisheries are important. Oysters represent two-thirds of the value of the annual product. The preparation of tobacco is the leading manufacturing industry, and flouring and grist mill products rank second in volume, while lumber and timber products hold third place. Virginia has advanced to fifth place in the production of pig-iron. In the manufacture of cotton Virginia has shared in the remarkable progress shown by the Southern States as a whole in recent years, being aided by the development of its water-power.

The mineral wealth of the State is large. Gold is found in the Blue Ridge Mountains, and iron ore is mined in every district west of the Tidewater Country. Copper, lead, and zinc also are found, and the quarrying of building stones of various grades is an important industry. The principal workings of coal are located in Tazewell and Wise counties in the southwest. The coal-fields cover a total estimated area of 2,000 square miles. In the production of coke Virginia now ranks fifth among the States.

Chief Cities. Richmond, the capital and chief commercial city, is built upon hills overlooking the James River. It is an important center of trade and manufacture. The capitol is an imposing structure. Norfolk, the chief port for foreign commerce and the second city of the State in size, is situated at the junction point of two streams forming the Elizabeth River. Just across the river is Portsmouth, which has

OLD SMITHFIELD CHURCH

The old church at Smithfield, in Isle of Wight County, is believed to have been erected in 1632, that date being imprinted upon some of the bricks in its walls. It is probably the oldest existing edifice of Protestant worship in America.

a harbor frontage of about a mile. At Gosport, which adjoins Portsmouth on the south, is located a Government navy-yard. Newport News, a little to the north and west of the two cities, in addition to being noted for its large shipbuilding interests, has gained great favor as a winter resort. Petersburg is situated at the head of tidewater on the Appomattox River. Roanoke, situated in the heart of the mineral region, is an important manufacturing center. Lynchburg and Danville both have a large tobacco and cotton trade.

WEST VIRGINIA

West Virginia has a total area of 24,780 square miles, of which 135 square miles are water surface. Of the population of West Virginia the foreign-born element is small. The colored population is much

THE CAPITOL, CHARLESTON

In 1870 the State government was established at Charleston, where, except for ten years at Wheeling, it has since remained. Charleston was favored because of its accessibility. The Capitol was occupied in 1872.

less than in any other State south of Mason and Dixon's line, being less than five per cent of the total number of the inhabitants.

Surface Features. Although West Virginia is almost entirely mountainous or hilly, most of the hills are fertile and can be tilled. The Allegheny Mountain ridges extend along the eastern border of the State. Nearly parallel with the Alleghenies, and at a distance of from twenty to forty miles to the west, is another series of ridges, continuations of the Cumberland Range, known locally as the Laurel Hills and Cheat, Shavers, Rich, Middle, East, and Backbone mountains. The average elevation of West Virginia, 1,500 feet above the level of the sea, is greater than that of any other State east of the Mississippi River. Its lowest elevation is at Harpers Ferry, on its extreme eastern edge, and its culminating point is the summit of Spruce Knob, in Pendleton County, having an elevation of 4,860 feet.

THE FALLS OF THE NEW RIVER, AT NEW RICHMOND

West Virginia, although not among the commonwealths of the United States famous for their scenic features, nevertheless possesses many localities that vie in picturesqueness and beauty with the more celebrated attractions of other states. Among its great rivers, coursing through the gorges of mountain valleys, is the New, which takes the name of Kanawha in the lower part of its length. Some miles below the city of Hinton on the New River, near the little station of New Richmond, are cataracts that are worthy of wider fame than has thus far been granted to them.

The eastern part of West Virginia is drained by the Potomac River and its upper tributaries, but the drainage of the larger part of the State is into the Ohio River. The principal streams are the Big Sandy, Kanawha, and Monongahela. The Big Sandy River has its sources in Kentucky, and forms a part of the boundary between that State and West Virginia. The Kanawha River is an avenue of commerce in the lower part of its course. The Monongahela River is navigable from its mouth to Morgantown, in Monongalia County.

Climate, Flora, and Fauna. West Virginia has a moderate and healthful climate, free from malaria and excessive humidity. The highland air is pure and invigorating. The winters are short and never severe, while the summers are long and modified by the cool mountain air. The mean annual temperature is about 54°, and in all parts of the State rainfall is abundant and well distributed.

In the western half of West Virginia the flora comprises, besides the common forest trees, the tulip-tree, hackberry, sweet-gum, persimmon, papaw, and sassafras, while the wild principal animals are the gray fox, fox-squirrel, and opsosum. In the mountain section the forests consist mainly of hemlock, poplar, and coniferous trees. Fruit-trees thrive in all parts of the State.

Resources and Industries. More than one-half of the population of the State is engaged in farming. Nearly all the cereals are grown, the principal crop being corn, while other important farm crops are potatoes, wheat, oats, rye, buckwheat, and hay. Tobacco is an important production of the southern counties, and fruits of almost all varieties are abundant. The raising of live stock, principally for shipment to Eastern markets, is an important and profitable branch of agriculture. Sheep also are largely raised for their wool.

The vast coal-beds of the State constitute its principal mineral wealth. The principal localities for mining operations are the valleys of the Ohio, Kanawha, and Monongahela rivers. West Virginia has increased its production of petroleum until the yield is exceeded only by that of Ohio. The oil belt extends from Wetzel and Monongalia counties on the northern boundary to Wayne and Logan counties in the southwestern part of the State. Natural gas in America was discovered first in West Virginia. Iron ores are

found in different parts of the State, but not in paying quantities. Zinc occurs, and there are traces of copper and lead.

In the present volume of its products and, in the rapidity of its growth during recent years, the manufacture of iron and steel, which is confined to the city and vicinity of Wheeling, leads all other manufacturing industries of the State. Next in rank is the manufacture of lumber and timber products. The forests of the State cover an area of about 16,000 square miles, and include most valuable areas of hardwood timber. The leather industry, the manufacture of pottery, and glass-making are representative industries. The brines of the Kanawha Valley are the basis of a large salt-making business.

Chief Cities. Wheeling, the metropolis of the State, is situated at the junction of the Ohio River and Wheeling Creek. The hills in the vicinity contain inexhaustible supplies of coal and natural gas that furnish manufactories with fuel at small expense. Some of the largest nail factories in the country are located at Wheeling. Besides large iron and steel mills, the city has notable manufactories for glass, tobacco, and malt liquors. The State capital was formerly located here. On the Ohio River below Wheeling is Benwood, the seat of large and important iron-works.

Charleston, the capital of the State, is situated on the Kanawha River, in a rich agricultural region surrounded by an unlimited supply of coal and timber. The manufacturing and commercial interests of the city are important. Huntington, the second city in size in the State, is the center of lumber interests and has large car-shops. Parkersburg has a very extensive industry in oil-refining and is the metropolis of the West Virginia oil-fields. Martinsburg is the largest town in the eastern part of the State. Fairmont has flourishing manufactories and prominent educational interests. Moundsville is a coal-mining and manufacturing center Here is located the State penitentiary, supported by the labor of the convicts.

CITY HALL, WHEELING

The City Hall, favorably situated and of tasteful architecture, is usually accounted one of the most attractive buildings in the city.

COAL TIPPLE

Near Charleston the Great Kanawha is much used for coal shipment, steamers being used for towing laden coal barges down the river.

GORGE OF THE NEW RIVER, BELOW COTTONHILL

Between Cottonhill and Gauley the narrow valley of the New River shows below its wooded slopes a canyon formation. Here a massive rock stratum that has followed the course of the stream from above Cottonhill suddenly swells to a thickness of 100 feet. Resisting the action of the elements, it forms broken but almost perpendicular walls that rise abruptly from the stream except in places where the cutting of a railroad along the mountain side has destroyed the steepness.

Historical. West Virginia, in common with other interior sections of the country, shared in the long history of pioneer struggles and Indian wars. The first settlement was made about 1727 in what is now Jefferson County, on a tributary of the Monongahela River. The early settlers, with but few exceptions, came from Pennsylvania, Maryland, and Virginia. As a distinct State within the Union, the history of West Virginia begins with its separation from Virginia, consummated in 1863. The division of the "Old Dominion" into two quite distinct commonwealths is to be traced to the natural division formed by the physical barrier of the Allegheny Mountains, which created a diversity of interests and sympathies between the communities to the east and to the west, and effectually prevented commingling or amalgamation. Slavery hardly existed within the counties of the mountain region and there was little political sympathy between the slave-holding districts of the eastern part of the State and the non-slave-holding areas of the western portion. Consequently, the movement to organize secession met with no favor in the western counties, and when a State convention adopted an ordinance of secession the people west of the mountains held a constitutional convention and organized a duplicate State government, considering themselves as the real State of Virginia. With this as a preparatory step the formalities for creating the new State of West Virginia were carried out and Congress acknowledged the entry of a new commonwealth into the Union. Since the settlement of the problems arising out of the altered conditions wrought by the War of Secession the history of West Virginia has been chiefly one of industrial development, accompanied by such peaceful changes as are brought by increased wealth and prosperity.

NORTH AND SOUTH CAROLINA

NORTH CAROLINA

NORTH Carolina is one of the thirteen original States. Its area is 52,250 square miles, of which 48,580 square miles are land surface and 3,670 square miles are water surface. Of the population of North Carolina, the element of foreign-born inhabitants constitutes but one-fifth per cent. The colored population is large, being one-third.

Surface. On a basis of physical configuration North Carolina may be divided into four sections—the coastal lowland plain, the midland region, the Piedmont Plateau or foothill region, extending to the base of the Blue Ridge Mountains, and the upland plateau, including the mountainous area in the extreme western part of the State. This plateau is a part of the great Appalachian Mountain belt. On its eastern boarder are the Blue Ridge Mountains. Viewed from the east the Blue Ridge shows a steep, ragged, and broken escarpment rising abruptly to a height of 2,000 feet or more above the foothills at its base. On the western border of the plateau is a southwesterly extension of the Allegheny Mountains, known locally as the Great Smoky Mountains, having an elevation of 3,000 feet to over 6,700 feet above the sea. The depression lying between the bordering mountain chains of the plateau is subdivided into a series of valleys by transverse ranges, such as the Black Mountains, the latter containing Mount Mitchell (6,711 feet), the highest peak in North America east of the Rocky Mountains. Southwest lies the valley of the French Broad River. The entire upland region is characterized by picturesque scenery of rare beauty and grandeur.

THE CAPITOL AT RALEIGH

The State of North Carolina had no fixed capital until 1794, when the General Assembly began to hold its sessions at Raleigh, a centrally located town that had been laid out two years previously by a State commission and was intended to serve henceforth as the seat of the State government. In 1830 the present handsome granite Capitol, constructed upon classic lines, was completed.

Rivers. The greater part of North Carolina is drained by the Roanoke, Neuse, Pamlico, Cape Fear, Yadkin, and Catawba rivers, each flowing into the Atlantic Ocean. The waters of the western part of the State beyond the Blue Ridge Mountains reach the Mississippi River through the French Broad and Little Tennessee rivers. The obstructed outlets and numerous rapids of the large North Carolina rivers render the streams of but slight value for navigation. Cape Fear River is navigable for light vessels to Wilmington, and for sloops to Fayetteville, 120 miles inland. The Roanoke River is navigable for small vessels to Halifax. The Neuse River is navigable for about 120 miles from its mouth. The Tar River also is navigable for steamers.

Climate, Flora, and Fauna. The climate in summer of the low coast lands of North Carolina is mild and humid; in the midland region it is warm and healthful; in the western uplands it is much cooler and the extremes of temperature are greater. At Asheville, in the mountain region of the west, the mean annual temperature drops to 55°. There is ample rainfall throughout the State.

The forest trees of the uplands of North Carolina are the oak, hickory, ash, walnut, beech, and lime; in the low country the pine predominates; and the swamps are covered largely with cedar, cypress, maple, oak, and poplar trees, with an undergrowth of vines. Among the indigenous fruits is the scuppernong grape, which has admirable vinous qualities. Cranberries grow in abundance and other fruits flourish. In the forests in the eastern part of the State game-birds are numerous, and in the mountain region of the west some deer and bears are seen occasionally.

VIEW IN THE VALLEY OF THE FRENCH BROAD

The mountain country around Asheville, a typical portion of the Southern Appalachians, has become famous for its many attractions. Its medicinal springs, splendid climate, and beautiful scenery invite many visitors. The French Broad River, pursuing a winding way across the State line into Tennessee, is the principal stream of this section. Between Asheville and Hot Springs the river valley for much of its length is marked by steep wooded slopes that occasionally rise into rocky cliffs.

Farms and Forests. North Carolina derives its largest revenue from its fields and forests. Cotton, the principal product, is grown in two-thirds of the counties. The midland section of North Carolina has rich tobacco and hemp fields, the State ranking second in the production of tobacco. In the lowlands farther to the east, sweet potatoes grow abundantly. Rice is cultivated extensively throughout the southeastern part of the State. Other agricultural products

are corn, wheat, oats, rye, potatoes, and hay. Excellent grazing lands in the mountainous regions make dairying a profitable industry. Large quantities of fruit are sent to northern markets.

From the great pine belt, extending across the State from north to south, are taken the naval stores, rosin, pitch, and turpentine, for which North Carolina is noted in the commercial world. The annual cut of long-leafed pine in North Carolina is enormous. The largest forests of long-leafed pine are found in the basin of the Cape Fear River. Beyond the Neuse River the growth of the pine forests is of a mixed character, the long-leafed species being largely superseded by the loblolly-pine, short-leafed pine, and various deciduous trees. From the partially drained morasses in the northeastern part of the State white cedar and cypress are taken. About three-quarters of the State is timbered area.

MARKET STREET, NEAR FIFTH, WILMINGTON

Wilmington is the great commercial and industrial city of North Carolina. In colonial times it was for a period the capital of the province. As an emporium of trade it has usually been favored by prosperity, and wealth and culture here have found a home. The city's broad and well shaded residence streets are typical of many southern towns.

Mines and Manufactures. The mineral resources of North Carolina comprise gold, silver, copper, iron, lead, zinc, coal, nickel, porphyry, granite, limestone, sandstone, soapstone, mica, alum, and corundum. A small amount of coal is mined annually. Rich veins of copper exist in Person and Granville counties on the northern border, and extensive works for the mining and smelting have been established. The quarrying of granite, limestone, and sandstone is a profitable industry.

The development of manufactures in North Carolina has more than kept pace with the growth in population. The manufacture of cotton goods is the most important industry of North Carolina. The finished products are nearly one-third of the manufactured output of the State, and give North Carolina third rank among the States in the manufacture of cotton. The industry of second importance is the manufacture of lumber and timber products. An allied industry, the manufacture of planing-mill products, has shown rapid growth. Tobacco has been for years one of North Carolina's best known products. Among the other important industrial establishments of the State are flouring and grist mills, furniture factories, railway-car shops, tanneries, and factories for the making of fertilizers.

THE WILMINGTON WATER FRONT

Although twenty miles from the sea Wilmington receives at its wharves large ocean vessels. The city is one of the greatest ports in the world for the shipment of naval stores, and in addition enormous amounts of lumber and cotton are here delivered to ocean carriers. The yards and warehouses of the water front usually are crowded with export goods.

Cities. Wilmington, the metropolis and principal seaport, is situated twenty miles from the sea on Cape Fear River. It is a great cotton market; its trade is extensive and it has long been known as the leading market in the world for naval stores. Charlotte, in Mecklenburg County, has a historic interest and contains numerous manufactories. Asheville, in the western section, is famous for its scenery, and on account of its delightful climate is one of the most frequented of Southern health resorts. Raleigh is the seat of government. Beaufort, at the eastern end of Bogue Sound, is a winter resort.

TUCKASEGE FALLS, JACKSON COUNTY

Within the mountain country of Western North Carolina are rocky glens and dashing waterfalls whose beauty well repays the sight-seer for the labor expended in crossing the rough ridges to reach them. Tuckasege Falls is a triple cataract near the Balsam Gap, a picturesque place in the mountains a few miles southwest of Waynesville.

Historical. In 1524 Verrazano, in command of a French expedition, discovered the coast of North Carolina. Sir Walter Raleigh, in 1585, sent out a colony which landed on Roanoke Island, and was the first English settlement in the New World. In 1663 Charles II granted to courtiers all the region, which was called Carolina, in honor of the King, and several settlements were established. Formal division was made in 1729 between the northern and southern provinces of Carolina, which had been practically under separate governments since 1690, and the two provinces became respectively the Crown colonies of North Carolina and South Carolina. North Carolina sent delegates to the First Continental Congress. In May, 1775, the people of Mecklenburg County renounced their allegiance to the King, and on April 12, 1776, a convention of popular delegates at Halifax unanimously adopted a resolution in favor of independence.

Early in 1861 popular sentiment in North Carolina was in favor of preserving the Union, but after the surrender of Fort Sumter the tide turned in favor of the Confederacy and an ordinance of secession was passed in May, 1861. Federal naval forces soon took all the important coast towns except Wilmington, and the State was restored to its old status in 1868.

THE STATE HOUSE AT COLUMBIA

The city of Columbia was made the official center of South Carolina because the people of the western counties of the State demanded a more central location for the seat of government than that of Charleston, the colonial capital. The State government was removed to its new home in 1790. The present State House is a handsome granite structure that was completed sufficiently for legislative occupation about 1888, and is one of the most striking architectural features of the city.

SOUTH CAROLINA

South Carolina, one of the thirteen original States, has an area of 30,570 square miles, of which about 400 square miles are water surface. Foreign-born residents of the State are few in number. The colored element constitutes nearly three-fifths of the whole population, the State having, with the exception of Mississippi, the largest proportion of blacks of any commonwealth of the Union.

Surface. Geographically the surface of the State is divided into three sections, the lowlands, the middle section, and the highlands. The first comprises the coastal plain, which for about 100 miles inland is flat and sandy, consisting of alluvial soil covered with pine forests. Adjoining this expanse on the west is a belt averaging a little more than twenty miles in width, broken by low hills of red clay and sand, forming the middle section of the State. The red hills are from 300 to 600 feet high and are well wooded with oak and hickory. The sandhills or pine-barrens extend northeastward across the State for about 155 miles, in a belt from twenty to thirty miles wide. West of the middle section the surface increases in elevation, forming an undulating region of hill and dale that terminates at the extreme northwestern corner of the State in the Saluda and Chattooga ridges of the Blue Mountains. The higher western portion is about 114 miles long and twenty-one miles wide. It attains its highest elevation in Rich Mountain (3,569 feet).

River System. The Savannah River, the most important to the State, forms nearly its entire western boundary. This river is formed by the union of two streams which rise in North Carolina. It flows southeast and empties into the Atlantic Ocean about eighteen miles below the city of Savannah. Its length, exclusive of its branches, is estimated at 450 miles. Seagoing vessels can ascend to Savannah at all seasons. Among other important streams are included the Salkehatchie, the Edisto, the Santee, and the Pedee rivers.

Climate, Flora, and Fauna. The climate of South Carolina resembles that of Southern Europe, being mild, genial, and attractive, especially during the winter months. The Sea Islands and the uplands of the pine-barrens afford delightful places of residence during the summer months with complete immunity from the malaria that is prevalent in the coast districts. The mean temperature at Charleston is 66° for the year. The extreme range is between 104° and 7°.

The flora of South Carolina comprises a wide variety of trees, shrubs, and plants. In the lowlands known as the Savannah region, there are extensive areas of cypress, magnolia, red and white bay, and laurel-oak. To the north of the lowland districts, oaks are found, and farther north are the rolling pine lands, which yield abundant timber.

The forests abound in deer, wild turkeys, foxes, and many small, wild creatures. Among the birds are partridges, woodcocks, and many species of water-fowl. Fish are taken in abundance from the streams, the bays, and the inlets.

Natural Resources. South Carolina, although it has mineral and timber resources, is principally an agricultural State, its most valuable product, considered commercially, being cotton. In 1900 the State ranked fourth in the growth of that staple. Other important agricultural products were corn, wheat, oats, rye, potatoes, hay, rice, and tobacco. The most important rice fields are confined mainly to the swamps and tide-water lands along the coast. There are, however, many valuable rice plantations among the swamp lands higher up the rivers. South Carolina ranks second among the rice-growing States. Nuts, grapes, and other fruits, and garden vegetables grow luxuriantly throughout the State; figs, olives, and pomegranates flourish in the southern counties; and apple, peach, apricot, and cherry orchards are found everywhere.

Valuable building stone occurs within the State. The beautiful porphyritic granites of Camden and Buffalo creeks and the red granite found near Columbia are examples. Syenites resembling Quincy

BIRDSEYE VIEW OF CHARLESTON, FROM THE TOWER OF ST. MICHAEL'S

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Old St. Michael's Church, built for Anglican worship in 1752, when the Carolinas were colonies, is a famous landmark of Charleston. Its spire is a prominent point in the older portion of the city and a guide for the pilots of incoming vessels. During the Revolution the spire was painted black, it is said, to make it difficult for British fleets to enter the harbor. From the belfry, visitors may obtain a splendid view over the city. Looking inland the long line of Meeting Street is visible as far as its turning, and away to the right rises the old-fashioned tower of St. Philip's Church.

granite, and white and variegated marbles are found in the northwestern part. Manganese is widely distributed in the central counties, and coal exists in the counties in the northeast part of the State.

Manufactures. In the volume of its product, the capital invested, and the number of employees, cotton manufacture leads all other industries in the State. As a rule only the coarser grades of cotton goods are manufactured. Second among the industries of the State is the manufacture of lumber and timber products. The industry is pursued largely in the eastern and central parts of the State. The manufacture of fertilizers is likewise an important industry. Phosphate beds were discovered in 1837, but the value of the rock was not demonstrated until 1867, after which year South Carolina continued to be the chief source of the world's supply until its output was surpassed by that of Florida in 1899. The manufacture of cotton-seed oil and cake is an important and growing industry, but that of gristmill products has shown a tendency to decline.

Chief Cities. Charleston, the most important city and the chief seaport of the State, has a picturesque situation at the confluence of the Ashley and Cooper rivers, with an excellent harbor. The city contains many beautiful buildings and ranks high as a distributing center of the cotton trade. The chief industries are the manufacture of fertilizers, clothing, lumber and timber products, and foundry and machine-shop products.

PALMETTO

The variety of palm known as the palmetto is common in the Carolinas, and has given to one of the commonwealths in which it grows the popular name of the Palmetto State.

Columbia, the capital and the second city in size, is situated in the midst of a rich agricultural region at the head of navigation on the Congaree River. It contains several notable buildings and important educational institutions, of which the University of South Carolina, chartered in 1801, is the greatest. The principal industries are the manufacture of cotton goods, cabinet making, printing, and publishing.

Greenville is picturesquely situated on the Reedy River and is one of the main entrances to the mountain region. It is an important cotton manufacturing center. Spartanburg, a thriving town in the northwestern part of the State, is the center of the gold and iron region.

Historical. South Carolina comprises the southern portion of a vast area of the continent once claimed by both France and Spain. Both of these countries attempted the colonization of this region in the 16th century, but without success. The first permanent English settlement in South Carolina resulted from the expedition of 1670 under Capt. William Sayle, who was sent by the proprietors to form a colony at Port Royal. In the following year the colonists removed to the banks of the Ashley River, where they laid the foundations of "Old Charleston." The site of this settlement, however, was inaccessible to large vessels at low water and in 1680 the colony removed again and built on the ground now occupied by Charleston. Proprietary government continued until 1729, when South Carolina and North Carolina became separate colonies under direct control of the Crown. The colony suffered severely in the Revolutionary struggle, but the British withdrew in 1781.

On December 20, 1860, a State convention adopted an ordinance of secession, the first enacted by any State. Four days later the Governor formally proclaimed the dissolution of the union between South Carolina and the other States. Forts Moultrie and Pinckney were seized later and Fort Sumter was bombarded. The Civil War was thus begun. In September, 1865, at the close of the war, the ordinance of secession was repealed by a State convention at Columbia. In 1868 the State resumed its relations in the Union.

THE CAROLINA SEA-COAST, NEAR CHARLESTON

Along the whole sea-front of the South Atlantic States the shore in general is very low, and the typical sea-coast is a sandy beach broken by inlets or forming islands. Across the bay from Charleston is one of these coastal islands, with wooded stretches fringing its beach.

THE BATTERY, CHARLESTON

The site of the fortifications that protected Charleston in the colonial time is yet known as the Battery. It is situated on the seaward side of the city and now forms a broad esplanade protected by a stone sea-wall. Facing the harbor along the esplanade are stately mansions, some of them of considerable age and historic interest.

GEORGIA

GEORGIA, one of the thirteen original States of the American Union, has a total land surface approximately 58,980 square miles in extent. The water surface amounts to 495 square miles. Of the population the portion of foreign birth makes up but six per cent. The colored inhabitants, on the other hand, constitute nearly one-half of the aggregate.

Surface. The surface of Georgia includes three distinct zones. Along the coast and the Florida line the land is low and marshy and for twenty miles inland the average height is not more than ten or twelve feet above sea-level. At this distance is a terrace that rises some seventy feet higher, forming a plateau which extends about twenty miles farther inland. Still northwest of this is another elevated tract that gradually ascends until, at an average distance of 100 miles from the coast, elevations of 200 feet and upward are attained. From this point the surface ascends more rapidly, and hills increase in size until the spurs of the Appalachian Mountains are reached in the northwestern corner of the State. Atlanta, at the foot of the mountains, has an elevation of 1,050 feet, but some of the ridges attain a much greater altitude. Mount Enota, altitude 4,798 feet, is said to mark the highest altitude in the State. The elevations generally vary from 1,200 to 3,000 feet and form a picturesque barrier to the spurs of the Blue Ridge lying beyond.

THE CAPITOL AT ATLANTA

Atlanta became the seat of the State government of Georgia in 1868, having won the honor from Milledgeville by a munificent donation of land and buildings on the occasion of the reorganization of State administration under a new constitution. In 1877 the permanent location of the capital at this point was confirmed by a popular vote, and in 1889 the new Capitol, an edifice of considerable architectural beauty, was completed and accepted by the State as the home of its public offices.

The ridge forming the divide, or watershed, of Georgia is one of the most interesting physical features of the State. This elevation, separating the waters of the Atlantic slope from those of the Gulf of Mexico, enters the State from North Carolina, and passes south and southwest through Atlanta. Beyond, it extends first in a general southerly direction, and then, trending southeasterly, passes through the Okefenokee Swamp into the State of Florida. If drawn upon the map, this divide would form a nearly perfect curve from the northeastern corner of the State to Jacksonville, Florida, a little south of its southeastern angle. Okefenokee Swamp, which is about forty miles from the Atlantic Coast, is a shallow, fresh-water lake filled with black muck, situated on a plateau that forms the divide between the rivers that flow into the Atlantic Ocean and those that flow into the Gulf of Mexico. The swamp, which lies about 116 feet above high tide, comprises an area of 400,000 acres, portions of which are wooded.

Rivers. The rivers of Georgia are of the first importance in the development of her growing industries. Of those draining the Atlantic slope, the Savannah, the largest river of the State, flows in a southeasterly direction to the ocean through a course of 450 miles. Next to the Savannah the Altamaha is the largest river draining into the Atlantic. It is formed by the union of two large streams, the Oconee and Ocmulgee, which traverse the center of the State in a southeasterly direction, flowing nearly parallel for a distance of 250 miles, uniting in Montgomery County, about one hundred miles from the sea. The Ogeechee, also rising in the north, is of signal value to the State in that it drains a prominent industrial section of the country and has some excellent water-power. It is navigable for about fifty miles only. The Satilla and the St. Marys, which drain the southeastern portion of the State, and which are both navigable for a considerable distance, form part of the state boundary.

Of the rivers tributary to the Gulf basin, the largest is the Chattahoochee, descending from the Blue Ridge and taking a southwesterly course through the gold-bearing section of the State, forming its western boundary for some distance. This river is more than 500 miles in length, is navigable to Columbus, and is the source of great wealth to the State, not only as a waterway, but through its supply of water-power. The Flint River rises in the hilly country near Atlanta, and after a course of 300 miles unites with the Chattahoochee in the extreme southwestern part of the State. The Flint is navigable for steamboats to Albany.

The section of the State north and northwest of the Chattahoochee Ridge is drained by the Toccoa, Notley, and other affluents of the Hiwassee, a tributary of the Tennessee, and by the Oostanaula and Etowah rivers, which unite near Rome and form the Coosa, an affluent of the Alabama.

THE CARNEGIE LIBRARY, ATLANTA

Until 1899 the Young Men's Library, maintained by subscription, was the principal one in Atlanta. In that year the Carnegie Library was organized, in which the earlier institution was merged. A new and tasteful building has been erected, with funds contributed by Mr. Carnegie, on the lot donated by the Library Association, and reading privileges have been made free to the general public.

The Tallapoosa, a branch of the Alabama, rises in Georgia near the Alabama line, which State it enters at a point a little west of Rome.

Climate, Flora, and Fauna. The climate of the State of Georgia varies greatly with latitude, elevation, rainfall, and air currents. The extreme variation of mean annual temperature in different sections is from below 40° on the summits of the shrub-covered mountains of the northwest to between 70° and 75° in the southeastern interior. Of the nine climatic belts in the United States, only one is wanting in Georgia, namely, that found in the extreme south of Florida where the mean annual temperature is between 75° and 80°. In Middle Georgia the annual temperature averages between 60° and 65°. In most of Southern Georgia, however, it ranges between 65° and 70°.

THE FEDERAL BUILDING, AUGUSTA

Augusta, "the Lowell of the South," is a pleasant town, dating its origin from colonial times but proving itself very modern in spirit by its industrial enterprise. Broad and beautifully shaded streets intersect at right angles across the business portion of the town. A commodious and graceful building, erected by the Federal Government, contains the post office and quarters for the United States courts.

Foremost in the flora of Georgia must be considered the immense forests of pine which in the southern portion of the State cover millions of acres, and are a fruitful source of wealth by reason of the timber, resin, and turpentine they supply. Other trees of many kinds abound. Few varieties of wild animals are to be found in Georgia, although bears and foxes are occasionally met in the cane-brakes and swamps. Deer, turkeys, wild geese, ducks, and squirrels abound in portions of both the mountain and forest regions, while the smaller species of game frequent all sections of the State. Fish common to the South are taken in all the waters.

GROVE OF LIVE OAKS, SAVANNAH

From Virginia to Texas the live oak flourishes in the rich soil of the moist coastal regions, and it may be considered one of the trees characteristic of Southern forests.

Agriculture and Forests. The resources of the State are manifold. Its enormous cotton crop is second only to those of Texas and Mississippi. Until very recently the growing of cotton largely monopolized the cultivable area of the State to the comparative neglect of other important agricultural products. By degrees, however, these conditions are changing, and the planter, while still depending to a large extent on cotton as his surplus or money crop, now in the majority of cases also grows food supplies and raises cattle.

The culture of the famous sea-island or long staple cotton has been extended greatly in the State. By obtaining the seed from the coast or islands each alternate year, it has been found possible to grow this variety in the upland districts, and it is now largely produced and constitutes the greater part of all the cotton that is made into goods for the market. Corn is, next to cotton, the principal agricultural product of the State, and next to this comes wheat, of which the crop is always large. Oats, tobacco, and Irish potatoes are raised, as well as large quantities of sweet potatoes, and on the islands and along the coast rice is profitably grown.

Horticulture as a commercial industry is attaining large proportions rapidly, Georgia ranking first among the Southern States in fruit culture. Peaches, pears, grapes, and berries are grown in abundance, and in the southern section of the State oranges, lemons, figs, pineapples, and bananas are cultivated. The products of Georgia gardens and orchards are shipped to the markets of the principal Northern cities in enormous and increasing quantities.

Few interests in Georgia are more important than that of lumbering. It is the great pine State of the South. The long leaf variety has become known throughout the country as "Georgia Pine" and is in much demand for interior finishing.

Mines and Manufactures. Until within recent years coal for domestic use in Georgia was largely imported, but the working of profitable measures has now enabled the iron manufacturers to obtain a supply in the vicinity of their furnaces. Georgia now competes favorably with other States in iron manufacturing, the increase in its product during recent years being very great. Especially notable, too, is the constantly increasing output of the granite and marble quarries.

Among the important manufacturing establishments, railroad car construction and repair shops, factories for making fertilizers, flour and grist mills, foundries and machine shops, timber and lumber establishments, sawmills and planing-mills, cotton-seed

THE BIG SHOALS OF KINCHAFOONEE CREEK, NEAR ALBANY

Kinchafoonee Creek is one of the lesser streams of Georgia, and despite its name is really a small river. In its lower part, where it is swelled in volume by tributaries, it is a bold, unfailing stream with precipitous banks. Just above the city of Albany the creek empties into the Flint River, after passing over the Big Shoals, a series of rocky rifts. With their wide expanse of broken current the Big Shoals present a scene of much natural beauty, besides creating a water-power of some value.

A COTTON PRESS

Not every farmer of the cotton belt depends upon the great cotton presses in the towns for the baling of his crop. Small presses owned by the farmers themselves often perform that service.

oil and cake factories, turpentine and resin factories, and textile mills are now included. The great increase in recent years in cotton manufacturing is notable as an industrial fact of the highest importance.

Chief Cities. Of the cities of Georgia, Atlanta, the capital, is the largest. It has a beautiful site and is an important railway and manufacturing center. It is also the seat of excellent educational institutions and has many handsome public buildings and other structures, fine monuments, and beautiful parks that add to its attractiveness.

TYBEE LIGHT

At the mouth of the Savannah River a lighthouse on Tybee Island marks the channel that leads past the jetties and opens a way for commerce to the wharves of Savannah City.

Savannah, next in size and commercial importance, is one of the most progressive as well as one of the wealthiest cities in the South. The industrial character of the city is indicated by its many manufacturing enterprises, while in the vicinity are extensive truck farms and phosphate mines. The city is the principal seaport in the State, the third cotton port in the South, and the fourth in importance in the Union. It is widely known as a winter and pleasure resort.

Augusta, formerly the capital, is situated at the head of navigation on the Savannah River. It is an important seat of the cotton and lumber industries. Macon is one of the most flourishing cities in the State and is conspicuous for its large wholesale trade. It is one of the leading railway centers in Georgia. Its manufactures comprise cotton cloth, knit goods, iron wares, cotton-seed oil, and ice. Its educational institutions are of high standing. Brunswick, a railway terminus, is also a seaport from which large quantities of cotton are shipped.

Columbus is at the head of navigation on the Chattahoochee River. Owing to its magnificent water-power, its nearness to the Alabama coal-fields, and the large amount of available labor, the city rapidly is becoming an important commercial center. Athens, noted for its various institutions of learning, is the seat of the University of Georgia, the Agricultural College of Mechanic Arts, and the State Normal School.

PECAN ORCHARD, DOUGHERTY COUNTY

The growing of the pecan nut is one of the profitable industries of the New South. The tree which bears it is a variety of hickory that flourishes best on somewhat sandy soil. In Dougherty County, one of the centers of pecan production in Georgia, the groves aggregate several thousands of acres and are of remarkable fruitfulness.

Historical. The first white men to enter the territory now included in Georgia were De Soto and his band in 1540, on their march toward the Mississippi. Up to the 18th Century, however, the country remained a wilderness inhabited by savage tribes of Indians, and was claimed by both Spain and England. In 1729 the extensive country in the north was surrendered by treaty to Great Britain. In 1732 a royal charter was granted to the Colony of Georgia, and in the same year Oglethorpe with his followers located at Savannah. This remarkable man had conceived the idea that a free colony in America would afford an asylum for insolvent debtors. In May, 1733, he persuaded the Creek Indians to cede him their lands between the Savannah and Altamaha rivers, from the ocean to the head of tidewater. His colony grew rapidly in numbers, and in 1752 the charter of Georgia was surrendered to the Crown.

During the Revolution Georgia adhered loyally to the cause of independence, though devastated by the enemy. Savannah was captured by the British in 1778 and remained in their possession till the close of the war. Following the Revolution the people suffered from frequent incursions of Creeks and Cherokees, from which they were not relieved until 1838, when the Cherokees were transported west of the Mississippi River. From the settlement of the Indian question to 1860 few States in the Union made more rapid advancement in wealth and material prosperity than Georgia, which has become widely known as the "Empire State of the South."

THE SIBLEY COTTON MILL, AUGUSTA

Surrounded by a large area of cotton-growing country, Augusta long has been a favored market for that commodity. The presence of a splendid water-power in addition has given the city great cotton factories. A number of immense milling plants are situated along the city's power canal, which is nine miles long and creates a fall of nearly forty feet.

In the War of Secession her people bravely bore the sacrifices which that step involved. It was not, however, until toward the end of the war, when the tide had already turned and set in against the Confederacy, that the territory of the State became actually an important battle-ground of the great national struggle. On December 19, 1865, Georgia formally resumed her status as one of the States of the Union.

FLORIDA

FLORIDA, in shape a peninsula, has an area of 58,680 square miles, the land surface comprising 54,240 square miles and the water surface 4,440 square miles. Of the population of Florida, the colored element constitutes 43 per cent. There are six cities, large and small, in the State, and an urban population of 16 per cent. There is so much waste land that the density of population averages less than ten inhabitants to the square mile.

Surface. Florida has no mountains, its most considerable elevation being only about 300 feet above sea-level, but as to its surface the State may be divided into three sections. Northern Florida, lying north of the thirtieth parallel, is undulating, consisting largely of a succession of hills and dales. Central Florida is diversified by rich hummocks, high pine ridges, and gently rolling plains. Southern Florida is of coral formation, and the surface is, for the greater part, low and composed of swampy muckland. The extensive swamp called the Everglades is a dense jungle of vines, evergreens, pines, and palmettos, impassable during the rainy season, from July to October. Beyond Cape Sable, the southernmost point of the mainland, begins a remarkable chain of rocky islets called the Florida Keys, extending southwestward nearly 200 miles, usually following the configuration of the coast, and ending in the cluster of sand-heaped rocks known as the Dry Tortugas. The most important of these islands is Key West.

THE STATE HOUSE AT TALLAHASSEE

Because of its pleasant and healthful situation in the hill country, Tallahassee was made the capital of Florida and received the territorial offices in 1824. The present State House was completed and first occupied in the year 1842.

BISCAYNE BAY AND THE MOUTH OF THE MIAMI RIVER

Biscayne Bay is a tidal sound on the east coast of Florida, partly inclosed by sandy islands and peninsulas. Among the streams that empty into the Bay is Miami River, on whose forest-lined banks stands the little city of Miami, a winter home for tourists, an important center of fruit culture, and the headquarters of a busy fishing fleet. From capacious wharves, where ocean steamers land their passengers, a line of cottages and club-houses extends out to the Bay, making delightful retreats, screened by subtropical vegetation and swept by sea breezes.

Hydrography. Numerous rivers, lakes, and swamps furnish abundant drainage. The St Johns River rises in a marsh in Brevard County and reaches the Atlantic Ocean after a course of 350 miles. For about 200 miles from its mouth it resembles a lagoon rather than a river, being nowhere less than a mile in width; at various points in its course it passes through lacustrine basins, the largest being Lake George. It is navigable for 250 miles. Next in importance is Apalachicola River, formed by the Flint and Chattahoochee rivers at the southwestern angle of Georgia and flowing into Apalachicola Bay. This river throughout its entire course of seventy-five miles is navigable for steamers. The Suwanee and Caloosahatchee rivers both empty into the Gulf of Mexico. The St. Marys River rises in Georgia, and forms for a short distance the boundary between Georgia and Florida. There are many other rivers having little importance as waterways. The most important lake is Okechobee, lying on the northern border of the Everglades; it has a length of forty miles, a width of twenty-five miles, and a depth of twelve feet. The most remarkable natural curiosities of Florida are the subterranean streams which undermine the soft limestone formation and create numerous cavities in the ground called "sinks."

Climate, Flora, and Fauna. Except in the neighborhood of the swamps, Florida possesses one of the most equable and agreeable climates on the North American Continent. The usual range in Northern Florida is from 90° to 26°, in Central Florida from 95° to 43°, and in Southern Florida from 96° to 46°. These favorable climatic conditions result in a flora of great variety. In the extreme southern portion of the State the vegetation is subtropical. The cabbage-palmetto is abundant everywhere, and mahogany, ironwood, sea-grape, cocoanut, and other palms are frequently found. The marshy areas are covered with a dense growth of vines, evergreens, pines, and palmettos, and on the keys and islands grow boxwood, satinwood, and lignum vitæ. Farther north flourish the products that are commonly associated with the temperate zone. Forests of yellow pine characterize certain sections, and many other valuable woods are found among the swamps and hummocks of the interior. On the St. Johns River the water-hyacinth, a prolific floating plant, is so abundant as to hinder navigation.

Deer and black bears are found; foxes, wild turkeys, ducks, geese, quail, and other small game are plentiful. There is also an abundance of the smaller fur-bearing animals, such as the racoon and the

otter Reptiles are found everywhere, the diamond-back rattlesnake and the highland moccasin being the most venomous. Alligators inhabit the watercourses. The streams and lakes of the interior and the coastal waters of Florida abound in fish.

Resources and Industries. In Florida not more than one-eighth of the total land surface is included in farms, but a large part now neglected might be profitably cultivated. The small areas known as hummock lands are the most productive. Under careful fertilization the high pine-lands are suitable for horticulture, while the swamp-lands, when diked and cleared of timber growths, are especially adapted to the production of rice and sugar-cane. The most valuable farm products are corn, cotton and cotton-seed, miscellaneous vegetables, tropical fruits, sweet potatoes, peanuts, hay and forage, and tobacco. Sea-island cotton is the kind chiefly grown. Corn, the chief cereal, is grown mainly in the northern counties. Rice is cultivated in nearly every part of the State. Tobacco culture, long in disfavor among Florida planters, now is extending.

Besides the orchard fruits of the temperate zone, many subtropical fruits are grown. The orange is the best known in commerce, although within recent years there have occurred several severe frosts which greatly impaired the production. Pineapples are very extensively cultivated, while large areas also are devoted to figs, guavas, kaki, lemons, limes, pomeloes, olives, and other subtropical fruits. Within recent years, however, the orchard fruits of the temperate zone have

ENTRANCE TO FORT MARION

Nearly a century ago the flag of Spain was hauled down from the old fort at St. Augustine and American rule began. Over the entrance of the venerable pile, however, the chiseled coat-of-arms still mutely proclaims the sovereignty of King Ferdinand.

OLD STREET, ST. AUGUSTINE

St. Augustine, the former Spanish capital of Florida, is now quite Americanized in population and in general very modern in appearance. The older part of the town, however, retains the characteristics given to it by its Spanish builders, having many narrow streets, lined by stone houses with quaint, overhanging balconies.

greatly increased in production, and peach-trees now constitute about one-half of the fruit-trees. Irrigation, although of recent introduction, is being increasingly resorted to in many parts of the State.

The fisheries of Florida are of great value and are of growing importance in the markets of the country. Mullet, with oysters and pompano, form the chief catch on the eastern coast, while mullet, red snapper, oysters, and sponges are the commercial output of the western coast. Miami, on the eastern side of the peninsula, is a large wholesale fish market, and Tampa is a center for this trade on the west. Florida has a monopoly of the sponge fishery in the United States, the greatest activity being at the port of Key West.

Clay, marl, fuller's earth, limestone, and phosphate rock are the leading economic minerals of Florida, but the last named is the only one possessing great commercial value. In 1888 phosphate rock was discovered and mined in the State, and by 1900 Florida was producing more than one-half of the total output of the country. This phosphate is largely exported to Germany, Holland, Belgium, and England, but increasing quantities are being retained at home for fertilizing purposes. There is a bed of lignite on the Suwanee River, but it is of inferior quality.

The manufacturing industries of Florida are at present mostly dependent upon agriculture and upon the mineral and forest resources. The working up of lumber and timber products, including tar and turpentine, the manufacture of fertilizers, and the manufacture of tobacco are the three most important industries.

ROSS POINT, ON THE HALIFAX RIVER

Some distance south of St. Augustine a long narrow lagoon called the Halifax River extends about thirty miles parallel to the coast of Florida, separated from the ocean only by a narrow strip of land. It is a well-known winter resort. Its scenery, like that all along the Southern coasts, is a succession of low beaches, broken here and there by sandy points, or retreating in curved bays lined with clumps of palmetto and fern.

Winter Resorts. The southern latitude of Florida peninsula, giving it a distinctive climate and vegetation unlike those of any other commonwealth, has made it a region favored by tourists and health-seekers. Jacksonville and St. Augustine, in the northeastern part, have enjoyed the reputation of winter resorts for many years, and the former is now a stopping place for much of the winter travel bound farther south. All along the St. Johns River, and in the central lake region drained by it, are small towns, of which Palatka is the chief, that base their prosperity very largely upon the winter visitors. The beauties of the St. Johns and Ocklawaha rivers are widely known.

In recent years the popularity of the central towns has been partly eclipsed by the rise of a series of new resorts on the east coast of the peninsula, which, from St. Augustine to Miami, has become famous for its palatial hotels and other allurements to wealthy patrons. St. Augustine, Ormond, Daytona, Palm Beach, and Miami are the chief points in this series, but between the larger towns are a score of smaller places that are notable for their winter hotels and cottages. On the west coast of the peninsula Tampa has acquired a favorable position as a place of winter residence. The extreme south is less known, although Key West is visited by many sight-seers.

VIEW ON GOVERNORS CREEK

On Governors Creek, a tributary of the St. Johns River, may be seen a typical portion of the tangled Florida woodland. Across the narrow creek channel, obstructed by fallen timber, the tall trees almost form an archway. Their bared limbs are draped with funereal festoons of Spanish moss, and their roots are meshed in densely grown marsh vegetation that unavoidably suggests the haunts of serpents and saurians. Everywhere the gray tints of the hanging moss dominate the color scheme of Nature.

Chief Cities. Jacksonville, the largest city, is situated on the St. Johns River. During the winter it is the residence of many visitors from the North. The chief industry of the city is the sawing and shipping of lumber; it also enjoys a considerable domestic and foreign commerce, in which sugar, cotton, fruit, and vegetables form the principal items of export. Pensacola has a landlocked harbor that is among the deepest and safest in the United States, from which transatlantic steamships carry shipments to Europe and sailing vessels engage in the coast trade. Key West is situated on a small island of the same name off the southern extremity of Florida. The principal industries are fishing, the growing of tropical fruits, and the manufacture of cigars. It is a naval coaling station. Tampa, at the head of Tampa Bay, is a favorite winter health and pleasure resort. It has large lumber and tobacco interests. The city of St. Augustine is the oldest town founded by Europeans in the United States, and is one of the most picturesque and beautiful places in the country. Fernandina has an excellent harbor through which passes an export trade in lumber, cotton, naval stores, and phosphate. The town is also a popular winter resort. Tallahassee, the capital, occupying the site of an old Seminole town, is beautifully situated on a hill in Leon County, twenty-one miles north of the Gulf.

A PINEAPPLE CROP IN FLORIDA

The pineapple is cultivated successfully only in regions where severe frosts do not occur. Southern Florida is a large producer of the fruit. On soil so sandy and porous that nothing else of value will grow, the pineapple thrives, if nourished by occasional showers. Growers are able to reckon 10,000 plants to an acre of land when conditions are favorable to culture, and there is always a market in the North for their output.

Historical. Florida was first explored in 1512 by Ponce de Leon, Governor of Porto Rico, who came in search of the spring of perpetual youth and the fabled mines of gold, a report of which had spread throughout Europe. De Leon gave the name of Florida to the territory. Between 1562 and 1565 the French Huguenots attempted to secure a foothold on the coast of Florida, but their colony was exterminated by the Spaniards. St. Augustine, founded in the latter year, was the first successful settlement established in any portion of what is now the United States. In 1696 the Spaniards also settled at Pensacola.

The cession to Great Britain was made in 1763, but in 1781 Galvez, the Spanish commander at New Orleans, reconquered the western part of Florida, with Pensacola, and two years later the entire province was re-ceded to Spain. From this date until 1821, when the territory became a part of the United States, its industries languished, agriculture was neglected, and at no time during the interval was the population of both the Floridas estimated at more than 10,000. In 1822 Florida was created a Territory, and in 1823 Tallahassee was selected as the site for the capital.

In 1835 the devastating Seminole War broke out; it continued for seven years, rendering insecure all habitation outside of the districts already occupied. After the close of hostilities the settlement of Florida progressed with great rapidity and in 1845 it was admitted into the Union as a State. Upon the outbreak of the Civil War Florida joined the Southern Confederacy. Fort Marion, the navy-yards and forts at Pensacola, and the arsenals at St. Augustine and Chattahoochee were immediately seized by the State, but the towns on the eastern coast were captured early in 1862 and retained by the Federal forces. In 1865 the State repealed the ordinance of secession. Florida became prominent in national politics in connection with the disputed election of 1876.

ALABAMA

ALABAMA has a total area of 52,250 square miles, with 710 square miles of water surface. Of the population of Alabama, the foreign-born element constitutes but eight-tenths per cent, while the colored element is nearly one-half. The general prevalence of agriculture among the people is proved by the fact that the cities in the State contain not more than one-tenth of the inhabitants.

Surface Divisions. The surface of Alabama is separable into four great divisions, widely divergent in general character, known respectively as the Cereal Belt, the Mineral Belt, the Cotton or Black Belt, and the Timber Belt. In the northwestern part of the State lies the Cereal Belt, consisting of a section of the fertile Tennessee Valley. The Cumberland Mountain Range extends west, with a slight bend to the south, forming the divide between the waters of the Tennessee system and those of rivers trending toward the Gulf of Mexico. South of the Cereal Belt lies the mountainous Mineral Belt, embracing more than one-third of the total area of the State and containing those vast deposits of minerals in the working of which a new era in the industrial history of the State began. This gradually merges on the south into the Cotton or Black Belt, which consists of rolling fertile prairies, diversified by timber lands and irrigated by many streams. Farther south, covering the Gulf district and extending seventy miles north of the Florida boundary, lies the Timber Belt, about fifty miles wide and only slightly elevated above the level of the Gulf.

THE STATE HOUSE AT MONTGOMERY

Montgomery, a desirable site for a capital city because it was centrally located and so situated as easily to be accessible from all points, became the seat of government for Alabama in 1847. The State House, completed in 1849 but since then enlarged, occupies a sightly eminence known as Capitol Hill and has been the theater of many important events.

BOULDERS, NEAR ROCKFORD

Huge boulders of whitish granite are found near Rockford, in Coosa County, some of which have weathered into curious forms. One of the best known has assumed the likeness of an old man's head, the face bearing a look of great severity.

Rivers. The Tennessee River lies partly in Alabama. Entering the State at the northeastern corner, it makes a circular sweep to the northwestern corner, thus affording, with the aid of a canal at the Muscle Shoals near Florence, continuous navigation across the State. Of the affluents of the Mobile River, the Tombigbee River, rising in Northeastern Mississippi, is navigable for light-draft steamers as far as Columbus, Mississippi; the Alabama River is navigable to Montgomery, and the Black Warrior River, emptying into the Tombigbee near Demopolis, is navigable for steamers as far as Tuscaloosa. The Coosa River, a branch of the Alabama, is also navigable for much of its extent. The Chattahoochee River, rising in Georgia and emptying into Apalachicola Bay, forms the eastern boundary of the State in part, and is navigable as far as the falls at Columbus, Georgia, 300 miles above its mouth.

Climate, Flora, and Fauna. The climate of Alabama in the forested area near the Gulf is semi-tropical. The summers are long, but less oppressive than in higher latitudes, being tempered near the coast by almost perpetual breezes. The mean temperature in the northern section of the State is 75° for the summer and 42° for the winter, and in the southern section 80° for the summer and 52° for the winter.

Besides pines, the southern lowlands furnish the black cypress, live-oak, water-oak, magnolia, hickory, and many other trees. The mountainous regions of the State abound in dense forests of red and black oak, and in chestnut, locust, and hickory, intermingled with scrub-pine. Wild game, such as deer, turkeys, and

THE RIVER ROAD, NEAR FLORENCE

The Tennessee River takes a course across Northern Alabama, breaking into rapids at the celebrated Muscle Shoals. At the lower end of the reach of rapids stands the city of Florence. Here the Tennessee becomes smooth again, flowing through a changing but ever attractive region, sometimes lapping against low bluffs, at other times bordered by level tracts clothed with rich growth of vegetation. Well-kept roads, following the windings of the river, afford matchless views of valley landscape.

squirrels, frequent both the mountainous and the forested regions. Smaller wild animals abound throughout the State. Aquatic birds haunt the inland streams, and in the cane-brakes and swamps of the extreme southern counties bears are occasionally seen.

Resources and Industries. The mineral resources of Alabama are vast in quantity and varied in character, and have yielded large financial returns. Vast beds of iron ore and coal-measures of great thickness and extent underlie the whole central region. The coal is of a bituminous character and well adapted to the purposes of industries that require steam-power. The mineral deposits of Alabama also include lead ore, manganese, granite, limestone, sandstone, marble, and several varieties of ocher. In the northeastern section, gold in moderate quantities has been mined by placer methods.

THE WHARVES OF MOBILE

Mobile is one of the great shipping ports of the United States. Its harbor, originally too shallow for the entrance of large ocean vessels, has been deepened by the government, and the city is now an outlet for the immense cotton and tobacco growing country lying northward. Its position makes it also a natural gateway for trade with Cuba and Mexico.

The entire wooded area of the State comprises nearly three-fourths of the total area. The great Southern pine belt traverses Alabama from east to west In agriculture the staples are cotton and corn. Four-fifths of the farmers of the State are engaged to a greater or less extent in the production of cotton, which is grown in every county. Among the cereals, corn is by far the most important, occupying most of the entire area devoted to the cultivation of this class of agricultural products. Other crops of considerable, although vastly smaller, importance are hay, sweet potatoes, sugar-cane, rice, oats, and wheat. Sweet potatoes are most plentiful in the cotton belt. Rice is grown extensively in the extreme

CHALK BLUFFS, DEMOPOLIS

The Tombigbee River, reaching the lowland region of Southern Alabama, erodes a navigable channel through alluvial soil and soft rock formations. At Demopolis, an important point of steamer traffic, are characteristic chalk bluffs rising almost sheer from the river's edge.

southern part of the State and tobacco in the northern part. All kinds of fruits are produced.

Manufactures. Manufacturing industries have increased enormously in recent years. Manufactures of mining products, principally iron, steel, and coke, are the most important. Manufactures from farm products, mainly cotton and flour, and such forest products as lumber and turpentine, also form a considerable item. The marvelous development of the iron and steel industries in Central and Northern Alabama is due to the presence, in practical juxtaposition with the ores, of large coal deposits and of limestone and dolomite, which latter are used for fluxing purposes. About four-fifths of the iron and steel product consists of pig-iron. A large portion of the pig-iron used by English manufacturers is supplied by the foundries of Alabama. Among the States of the Union, Alabama is the largest producer of foundry iron. The second important industry is the manufacture of lumber and timber products. Following this comes the manufacture of cotton goods, which has greatly increased in recent years, while fertilizers are now being manufactured in increasing quantities to meet the demands of the cotton growers.

The development of the coal and iron resources of Alabama has been one of the striking features of the expansion of American industrial influence during the past two decades. The existence of ores and fuel in immense quantities was known, however, for many years before they roused extended interest. Previous to the War of Secession there were a few small charcoal furnaces used for local iron smelting at various points in the State, and during the war the furnace at Shelby, in Shelby County, became a source of supply for the military and naval needs of the Confederacy, iron plates being rolled there for the new ironclads of the Southern navy. During the period of war, also, the use of coke for smelting purposes began, but no advances were made along this line until 1876, when the Oxmoor iron furnace was started with coke. During the troubled times of the reconstruction period industry was inert in Alabama, but with the restoration of home rule, Northern capital sought investment and the great resources at once were given proper development. In 1881 the first coke furnace at Birmingham was started. Soon that city took front rank as a center of metal industry and new mining areas were exploited in other districts. From 1889 to 1894 Alabama was the second State in the Union in the amount of its iron product, but later the development of the Minnesota output relegated it to third place.

VIEW UPON THE SHELL ROAD, NEAR MOBILE

From Mobile one of the spacious avenues of the city is continued southward along the shores of the Gulf as the famous Shell Road. It is a firm and level driveway, built by laying a heavy course of crushed shells upon the uncertain sandy soil. For a distance of seven or eight miles the road winds along the Gulf's edge, passing breeze-swept summer resorts, penetrating groves of the evergreen magnolia or skirting closely the tidal waters of the Gulf.

Chief Cities. Mobile, the only seaport of Alabama, is built on a sandy plain that is bordered inland by high and beautiful hills. Its streets are well paved and beautifully shaded. Mobile is one of the leading commercial cities of the South and one of the principal cotton markets of the United States. Birmingham is the center of the metal industries of Alabama. The growing manufacture of iron and steel products throughout the South has, in the space of twenty years, transformed a small town into a city that rivals many of the greater industrial communities in the United States. Its iron and steel mills and furnaces furnish about one-half of the total value of its manufactures.

Montgomery is the State capital. The capital of the Confederate States was located here from February to May, 1861. Seven railways and the steamer traffic on the Alabama River make Montgomery a busy center of trade, principally in cotton. Third among the manufacturing cities is New Decatur, situated on the Tennessee River, which contains several large iron-working industries. Bessemer also is an iron-mining center, besides having coal-working industries and manufactories of fire brick. Anniston is another city with iron interests, but it also is a center for lumber and cotton interests, being near large timber tracts and in the center of a cotton-growing area. Troy is an important cotton-shipping point and has manufactories for fertilizers. Huntsville is another well-known cotton market, with large cotton mills; it is also an educational center of much importance. Of similar character is Selma, one of the oldest towns of the State, which has cotton industries and some schools of more than local fame. Talladega has a school for defectives.

NOCCALULA FALLS, NEAR GADSDEN

The Appalachian ranges, reaching into Eastern Alabama, give to that section highland scenery of great beauty. Black Creek, one of the little streams that flow from the long ridge called Lookout Mountain, has at one point carved out of the soft rock strata of the mountain slope an abyss into which it falls in a broad sheet of glistening whiteness.

Florence is a market town for an agricultural district, and contains one of the State normal schools. Tuscaloosa, located on the Black Warrior River, with coal-mines near by, has banking and mercantile interests of large extent and possesses the State University. Tuskegee, one of the lesser towns of the State, has become widely known in recent years as the home of the negro educator, Booker T. Washington, whose efforts in behalf of economic progress among the colored race have achieved world-wide recognition.

Historical. About 1539–41 the Spaniard De Soto and his men visited Alabama on their memorable explorations in search of a new "El Dorado." The first settlement occurred in 1702, when a body of Frenchmen, who had maintained a colony on Biloxi Bay in the present State of Mississippi, removed to a point on the Mobile River and erected a fort. Between 1702 and 1763 the territory was successively under the sovereignty of France, Spain, and Great Britain. After 1763 Spain claimed, as a part of Florida, the lands situated south of 31° N. lat., which are now included in the State of Alabama. During the War of 1812 the United States seized the territory in dispute and by the treaty of 1819 all of Spain's rights were purchased. At the close of the Revolution the greater part of the present State was included in Georgia, but in 1802 it was ceded to the General Government. Incorporated in the Territory of Mississippi until 1817, it then became the Territory of Alabama until 1819, when it became a State in the Union. In that year the first State Legislature assembled at Huntsville. The seat of government was removed to Cahaba in 1820, thence to Tuscaloosa in 1826, and finally to Montgomery. During the territorial period Alabama was the scene of an uprising among the Creeks. General Andrew Jackson defeated the Indians and forced them to surrender.

The State passed an ordinance of secession from the Union January 11, 1861, being the fourth to join the Confederacy. February 18th Jefferson Davis was inaugurated as President at Montgomery, which was the capital of the Confederacy until May, when the seat of government was transferred to Richmond, Virginia. Although no important battles were fought in Alabama during the first three years of the war, the State played an important part throughout the great struggle. In 1868 Alabama resumed its place in the Union.

MARKETING COTTON AT HUNTSVILLE

In the cities of the Southern cotton belt the season for marketing the crop brings to town scores of planters with their cotton. At such times the public squares are crowded with wagons, and on every hand are seen great bales, their fluffy contents protruding where the covering has been broken for inspection. Huntsville, in the Tennessee valley, is an important cotton market.

WEIGHING THE COTTON PICKINGS

MISSISSIPPI

MISSISSIPPI, which has an area, including islands, of 46,810 square miles, of which 470 miles consists of water surface, borders on the Mississippi River. In the population of the State of Mississippi the foreign element is almost absent, being less than one per cent. The colored population comprises nearly three-fifths, the largest proportion of Negro inhabitants shown by any State. The percentage of urban residents is very small and the number of cities and towns is inconsiderable.

Surface. In general the surface of the State is undulating or hilly. At some points along the Mississippi River, particularly at Vicksburg and Natchez, bluffs, in repeated series, often broken by water-worn ravines, rise to heights of 200 to 500 feet. The altitude of the uplands varies from 150 feet above the Gulf of Mexico, within a few miles of the coast, to 800 feet in the northeast, where is found the highest altitude in the State. In the northeastern and central sections of the State are extensive tracts of prairie.

West of the plateau the low alluvial region known as the Yazoo Delta extends northward from the confluence of the Mississippi and Yazoo rivers and embraces nearly 7,000 square miles. The surface of this area, diversified by cypress swamps, lakes, bayous, prairies, cane-brakes, and large forests, constitutes one of the most fertile districts in the whole extent of the Mississippi Valley Extending from Vicksburg along the eastern bank of the Mississippi River to the border of Louisiana, is an elevated strip of country usually known as the Cane Hills, which rises into hills or bluffs having in some places an altitude of 250 feet, and a width varying from five to fifteen miles.

THE CAPITOL AT JACKSON

Jackson, the capital city since 1822, was platted by a State commission on a site located almost exactly at the geographical center of the State. The present Capitol was completed in 1903.

MARKETING COTTON IN THE COURT-HOUSE SQUARE, HOLLY SPRINGS

Holly Springs, the county seat of Marshall County, is one of the oldest and at one time was one of the wealthiest of Mississippi towns. It is now an important point for the marketing of cotton. The great open space of Court-House Square is a busy spot in the pleasant autumn days when the men from the plantations and small farms bring in their season's crop for inspection and sale.

Hydrography. The entire drainage of the State flows ultimately into the Gulf of Mexico, if not directly then indirectly through streams that empty into the Mississippi River. In the west the Mississippi and its main affluents, the Big Black and the Yazoo, form the chief drainage arteries of the State. The Big Black River, after a course of about 250 miles, enters the Mississippi River near Grand Gulf. It is navigable for about fifty miles from its mouth. The Yazoo River, formed by the union of the Tallahatchie, Yalobusha, and Coldwater rivers, flowing in a sinuous course and discharging its waters into the Mississippi a few miles north of Vicksburg, is slow and sluggish, but as it lies in a rich and nearly level country it has become an invaluable commercial waterway, being navigable for its whole extent.

The principal rivers flowing directly into the Gulf of Mexico are the Pearl, the Pascagoula, and the Tombigbee. The Pearl River in the central part of the State flows generally southward 400 miles to the Gulf. Its navigation is obstructed by sandbars, but small boats can ascend it for a considerable distance, and flat boats can go up to Jackson. The Pascagoula River formed by the union of two small rivers, flows southward, emptying into the Gulf; boats of light draft can ascend it for over 120 miles. The Tombigbee River crosses into Alabama, where it helps to form the Mobile River, under which name its waters reach the Gulf.

The shallow portion of the Gulf touching the southern shore of the State is known as Mississippi Sound. This is separated from the broad expanse of the Gulf of Mexico by a chain of low islands lying from ten to thirty miles offshore. Ship Island is a low bank of white sand, seven miles long, with groves of trees at its eastern end and an excellent harbor on the west. The shore of Mississippi Sound is a succession of popular watering-places, comparable to those of the New Jersey coast. Among these places, which are visited by Southerners in the summer

and people of the North in winter, are Biloxi, Pass Christian, Bay St. Louis, and Gulfport. Beauvoir, the former home of Jefferson Davis, is now a Confederate Soldiers Home.

Climate, Flora, and Fauna. The climate of Mississippi is almost subtropical. The regions in the vicinity of the Gulf have in general a much milder temperature than the northern sections of the State, but the land and sea breezes in the south and the variable winds that prevail in other sections render the summer heat endurable. The winters, though colder than those on the Atlantic Coast in the same latitude, are nowhere severe. It is only in exceptional seasons that frost occurs. The rainfall comes mostly during the winter and spring months.

The flora of the State is varied, embracing a large number of subtropical plants as well as those belonging to the temperate regions. In the forests of the Delta, and in the rolling pinelands to the north of this, the growth includes a variety of trees very valuable for timber. Red gum, pine, oak, hickory, black-walnut, chestnut, pitch-pine, and magnolia are found. The deer, panther, wolf, bear, and wildcat are still found occasionally in the forests; alligators are common in the southern river-bottoms; paroquets are seen as far north as Natchez; and wild turkeys and pigeons abound. Fish are abundant in the streams and in the neighboring waters of the Gulf.

THE SHELL ROAD, PASS CHRISTIAN

A wide, shell-paved driveway lined with beautiful trees, extending along the shores of the Gulf at Pass Christian for a distance of seven miles, is one of the most delightful of the many attractive features of this much frequented resort.

MISSISSIPPI SOUND AT PASS CHRISTIAN

The pleasure resort of Pass Christian is situated directly upon the shores of the Gulf, the shallowness of the water along the beach affording delightful facilities for bathing but making it necessary to erect long piers to reach the deeper waters where the fishing boats and the oyster fleet usually cast anchor.

Natural Resources. The climate and the soil of Mississippi make it preëminently an agricultural State. Few of the conditions that create great centers of population and foster manufactures are found within its borders. It has no harbor of importance, very little water power on its rivers, and is deficient in mineral resources; but, on the other hand, it has great areas of fertile land and extensive forests. Cotton and corn are the leading agricultural products, and Mississippi ranks third among the States in the quality and value of her output of cotton. The other principal farm crops are corn, oats, potatoes, hay, and wheat. Flax and tobacco also are largely produced. The oat crop, as a rule, is profitable in all parts of the State. Sugar-cane and lowland rice are grown in the south. Upland rice is raised in the interior among the pine regions. Truck-farming has already attained considerable importance, and many of the Northern markets are supplied with melons and vegetables from Mississippi. Horticulture as an industry is acquiring prominence and increasing areas are devoted to orchards, the products of which, especially in Western Mississippi, have long been famous for their superior qualities. The strawberries of Central Mississippi are known in the markets of the Northern States for their high

THE QUITMAN HOME, NEAR NATCHEZ

A little outside of Natchez is "Monmouth," the former home of General Quitman, whose exploits during the Mexican War made him one of the heroes of his State. The mansion is still one of the most interesting of historic Southern homes.

VIEW FROM THE BLUFF AT NATCHEZ

The city of Natchez occupies a bluff that rises 200 feet above the waters of the Mississippi River. On the summit of the bluff is a handsome residence district, while far below lie the business portion of the city and the water-front. A broad street leads downward from the heights to the lower levels. The city perpetuates the name of a warlike Indian nation that opposed French conquest in the 18th century. In 1729 the Natchez bluff was the scene of a bloody struggle in which Indians annihilated a French garrison.

quality. Plums, pears, apricots, grapes, nectarines, and peaches, with many varieties of apples, are grown successfully throughout the State but chiefly for home consumption. In the Gulf region, oranges, figs, bananas, and olives reach perfection. A growing source of wealth is the raising of pecans for market, large orchards of these nuts being planted in many localities in the State.

The forests of the State, affording an almost inexhaustible supply of timber, form a very important resource, ranking next in value to that of agriculture. Pine, cypress, and oak timber is taken out in great quantity, much of it being shipped to the various lumber markets of the Middle West.

CUTTING STAVES IN A MISSISSIPPI FOREST

Mississippi is yearly acquiring new importance as a lumbering State. The cutting of barrel staves is one of the ordinary industries of the wooded sections, skilled choppers levelling the trees and hewing the felled logs into portions of the proper length for transportation to the mill where the finishing is done.

Manufactures. Foremost among the industries of Mississippi is the manufacture of lumber and timber products, which is conducted chiefly along the Pascagoula River in the southeast and in Hancock County in the southwest. Second in rank is the manufacture of cotton-seed oil and cake. The origin of this now extensive industry was in Mississippi, and in the city of Natchez, in 1834, the first cotton-seed-oil mill in the United States was erected.

The most remarkable development in recent years has appeared in the cotton-ginning industry, which now holds third place among the industries of the State. In this line Mississippi is now only surpassed by Texas and Georgia. Next to cotton-ginning in importance stands the manufacture of turpentine and rosin, an industry of recent growth. The manufacture of cotton goods holds fifth rank among the industries of the State, and there is considerable manufacture of planing-mill products.

Chief Cities. Vicksburg, built on high bluffs overlooking the river, is the largest city in the State and the chief city on the Mississippi River between Memphis and New Orleans. It has a large export trade in raw cotton and important and growing manufactures of cotton, cotton-seed oil, foundry and machine-shop products. The river trade is large. Meridian, the city second in size, is one of the principal railway junctions in the State and ranks foremost as a manufacturing center for cotton goods, cotton-seed oil, earthenware, and pottery. Natchez, one of the oldest cities in the State, dating from the erection of Fort Rosalie in 1716, is an important shipping port for cotton. Jackson, the capital of the State, is a railway and manufacturing town situated on the Pearl River and surrounded by a fertile agricultural region from which great quantities of vegetables and fruit are shipped.

Greenville is also a railway center of some prominence, as well as a river port and an industrial town. Columbus, on the Tombigbee River, is a cotton center. Yazoo City, also a great cotton center, has manufactures of cotton-seed oil and lumber. Biloxi is the largest of the coast towns; its industries are lumber-mills, canneries, and boat-building yards. Wesson has large cotton and woolen mills. Water Valley and Aberdeen are cotton centers. Oxford, also in a cotton-growing district, is the site of the State University

Historical. After the explorations of Hernando de Soto, who in 1541 discovered the river called by the Indians "The Great River" or "The Father of Waters," and who died in the following year near its banks, the region now comprising the State of Mississippi was not visited again by Europeans until 1673, when the French explorers Joliet and Marquette descended the Mississippi River. In 1682 La Salle and Tonti took formal possession of the surrounding country in the name of Louis XIV, King of France, giving it the name of Louisiana. In 1699 D'Iberville made the first settlement in the State, at what is now Biloxi, which, however, was not permanent. In 1717 all commercial privileges in the territory were granted to the Western Company of John Law, whose project became known as the "Mississippi Bubble," and, becoming bankrupt in 1732, its representatives returned their franchises to the Crown. In 1763, by the Treaty of Paris, the French possessions east of the Mississippi River were relinquished to Great Britain. Following this event, settlement of the Mississippi country increased, but in 1783 the United States secured the northern part and Spain the Gulf district. In 1798, after long negotiations, Spain relinquished her claims over the disputed Gulf region, and Congress at once incorporated it into the Mississippi Territory, which was enlarged by additions and, finally, in December, 1817, formed into a State. In the early thirties nearly all the native Indians were deported to the west of the Mississippi River and their deserted lands were quickly seized by immigrants. Washington, Columbia, Natchez, Monticello, and Jackson became in turn the seat of government.

THE COURT-HOUSE AT VICKSBURG

Among the various public buildings that have been erected in the city of Vicksburg in recent years is the county court-house, in which the local administration of Warren County has its head-quarters. It is attractive in style, with Ionic entrances and an octagonal clock-tower surmounted by a graceful cupola.

In January, 1861, Mississippi seceded from the Union and during the War of Secession was the field of many campaigns and suffered greatly from loss of men and destruction of property. A State convention assembled in 1865, the constitution was amended, abolishing slavery, and the ordinance of secession was repealed. In 1870 the State was restored to its former relations with the Union.

A FAMILY GROUP IN THE BLACK BELT

TENNESSEE AND KENTUCKY

TENNESSEE

TENNESSEE, with an area of 42,050 square miles, has 300 square miles of water surface. Of its present population the foreign-born inhabitants comprise about one per cent and the colored element twenty-three per cent. The urban population is about one-seventh of the total of the State.

THE CAPITOL AT NASHVILLE

The legislature of Tennessee has met continuously at Nashville since the year 1826, making Nashville from that time virtually the State capital, although not so designated legally until 1843. Its central location first secured this honor for the city and the gift of a building site at the proper time made it the final choice. The State government building, first occupied in 1853 by the legislative body, stands on an eminence within the city and is an extremely interesting piece of architecture.

Surface Features. Tennessee perhaps is more diversified in its surface than is any other of the Southern Central States. The eastern section of the State is mountainous, being traversed from north to south by ranges of the Appalachian system. In the middle section of the State the surface almost imperceptibly slopes downward from the mountainous uplands to a rolling country of great fertility, watered by innumerable streams. Between the Tennessee and Mississippi rivers in the west is a tract of land the surface of which is nearly level. A southwesterly extension of the Blue Ridge of Virginia, under the local names of the Stone, Iron, Bald, Great Smoky, and Unaka mountains, forms the dividing line between Tennessee and North Carolina, while the prolongations of the Allegheny Mountains, known locally as the Chestnut and Laurel ridges, traverse the State northeast and southwest. The Cumberland Mountains, with a breadth of about fifty miles, are almost continuous, being interrupted only at considerable intervals by gaps or passes, and in some localities they are rocky and rugged. The highest peak in the State is Mount Guyot (6,636 feet).

The Cumberland River, with both its source and its mouth in Kentucky, flows for about 314 miles through Tennessee, in which lies its extreme southern bend. This river is navigable, during at least six months of the year, for 518 miles. The Tennessee River, with a total descent of about 1,700 feet in its course, flows through the mountain valleys of East Tennessee and crosses into Alabama, then turns northward, crossing Tennessee and Kentucky to reach the Ohio River. It is navigable a large part of its length. The Elk and Duck rivers are the principal tributaries of the Tennessee River, and both rivers are navigable for a considerable distance. The Sequatchie River is a smaller stream flowing through a valley in the Cumberland Mountains.

LOOKOUT MOUNTAIN, NEAR CHATTANOOGA

The precipitous heights of Lookout Mountain, dominating the entire country around Chattanooga, became of great strategic importance in the years when armies struggled for the mastery of the Tennessee Valley. Memories of historic events, of which many local reminders still exist, yearly attract hundreds of sight-seers to the famous peak.

Climate, Flora, and Fauna. In Tennessee the winters are usually mild and always short, the summers being long and, in the western portion of the State, very warm. As in Kentucky the extremes of 90° and zero are seldom passed. The prevailing winds from the southwest bring an ample rain supply from the Gulf of Mexico. Snows are frequent in winter but do not long remain upon the ground.

Forest trees include the cypress, larch, and cottonwood in the western parts of the State, while in the eastern sections hemlock and several varieties of pine occur. In almost every part of Tennessee are found the common forest trees. The wild animals include the bear, found only in the mountainous districts, the deer, raccoon, red fox, gray fox, and other small wild animals. Game birds are numerous throughout the State, and fish abound in all the rivers.

THE HERMITAGE, NEAR NASHVILLE

The old home of President Andrew Jackson, not far from Nashville, a dignified Southern mansion of the early type, is visited by many tourists to whom the home of the great political leader is of interest. The Hermitage, now owned by the State, received as guests many eminent American statesmen during the lifetime of its famous owner.

Resources and Industries. The diversity of soils and conditions in the State gives considerable variety in its agricultural products. Corn is the largest and most valuable crop grown. Wheat is increasing in importance, while oats are decreasing. In the southwest portion and in some northern counties, cotton is the chief product. Potatoes,

hay, peas, and sorghum are other noteworthy crops. From the Tennessee Valley large quantities of peanuts are sent to market. The climate of the State is favorable to fruit culture, and the growing of strawberries and melons is increasing to large proportions. In the middle section of the State the breeding of horses for the race-track and of mules for draft purposes is one of the most important of rural industries. Dairying has reached moderate development.

The mineral resources of Tennessee are also large and varied and during recent years have been greatly developed. The most valuable, from an economic point of view, are coal, iron ores, phosphates, and marbles. The coal area covers 5,000 square miles. The iron regions of Tennessee are situated along the Unaka Range in the southeast, at the eastern base of the Cumberland Mountains, and in a belt lying for the most part immediately east of the Tennessee River. Some copper is mined. Tennessee now holds second rank among the States in phosphate production, and the output is shipped to many points in the United States and to Europe. Variegated marbles of rare beauty are found, especially in Eastern Tennessee.

FOUNTAIN SQUARE, MEMPHIS

Among the points of interest in Memphis is Fountain Square, which has two distinguishing features, one being the artistic fountain that occupies its center, and the other the scores of squirrels that riot in the trees around. Because of the latter the spot is often called Squirrel Park.

The manufacture of flouring and grist-mill products now outranks all other manufacturing industries in importance. The wooded area of Tennessee is estimated at over 17,000,000 acres, of which about one-third is covered with merchantable timber of great variety and value. The manufacture of textile goods is increasing. Other industries bringing in large returns are the manufacturing of tobacco, the distilling of spirits from grain and fruit, the manufacture of cotton-seed oil and cake, and the tanning of hides for leather. Iron and steel works are increasing in number.

THE VALLEY OF THE EMORY RIVER, NEAR HARRIMAN

The Emory River, draining portions of several counties in Eastern Tennessee, is one of the minor streams of the State, emptying its waters into the Tennessee River. It lies upon the Cumberland plateau and like other streams of the region has a deep valley whose slopes rise continuously from narrow bottoms to the divides, sometimes reaching a cliff-like steepness, but usually forming easy slopes covered with low forest. Through the valley extends one of the important railway lines.

Chief Cities. Memphis is the chief commercial city of the State, ranking as the most important railway and commercial center on the Mississippi River between New Orleans and St. Louis. Nashville, the State capital and the second city in size, situated on both sides of the Cumberland River, is the leading center of the educational and charitable interests of the State, and has also varied and extensive manufactures. Knoxville, beautifully situated in the Tennessee Valley on the Holston River, is a flourishing railway and manufacturing center and the chief commercial city of Eastern Tennessee; it is the site of the State University. Chattanooga, near the foot of the historic Lookout Mountain on the Georgia border, is noted for its fine climate and scenery. Situated on the Tennessee River with railways diverging in all directions, Chattanooga is the shipping point for the greater part of the products of Middle and Eastern Tennessee, and it is one of the most important industrial centers of the State.

Historical. Upon the division of Carolina into two provinces the region forming Tennessee was allotted to North Carolina. Between 1740 and 1750 the eastern parts of the country were explored and large grants of land awarded. The first permanent colonists were persons who settled here in 1755 and by 1773 the population had increased considerably. The year 1776 was made memorable by a formidable invasion of Cherokees, whom the British incited to attack the new settlements. When the constitution of North Carolina was framed, in 1776, Tennessee, then known as the "District of Washington," sent delegates to the convention. The mountaineers of North Carolina and Tennessee distinguished themselves in the Revolutionary War. In 1783 the Legislature of North Carolina set aside a tract of land in the vicinity of Nashville for the payment of military bounties due its officers and soldiers who had served in the Continental army. Following this act the influx of immigrants into the country was large.

In 1784 the inhabitants attempted to form an independent State of Franklin, but the scheme was abandoned in 1788. In 1789 North Carolina ceded the territory to the United States, and Congress, accepting the cession, provided for its government under the title of "The Territory of the United States South of the Ohio," which included the present States of Kentucky and Tennessee. A State constitution having been adopted by the people of Tennessee in 1796, was approved by Congress, and Tennessee was admitted into the Union as a State.

During the Civil War the position of Tennessee was anomalous. The State refused to secede prior to the actual opening of hostilities. In Eastern Tennessee the people were loyal to the Union, but in Western Tennessee popular sentiment favored secession. A referendum vote finally decided for secession, the war having actually begun when the vote was taken. Tennessee was the field of military operations after 1862. On January 9, 1865, a State convention was held at Nashville, as a result of which the ordinance of secession was annulled. In July, 1866, the State was readmitted into the Union. The seat of government, at first fixed at Knoxville, was, after several changes in location, finally established at Nashville in 1825.

KENTUCKY

Kentucky has an area of 40,400 square miles, inclusive of about 400 square miles of water surface. Of the total population of Kentucky, the foreign-born form less than three per cent. The colored element is smaller than in most of the old slave States, constituting but thirteen per cent. The urban population is one-fifth of the total.

THE STATE HOUSE AT FRANKFORT

When Kentucky first acquired statehood Frankfort won the place of State capital away from Danville, the only other contestant for the honor. Both were small but centrally located towns. From 1793 onward the State government has been located here. The old State House, built of Kentucky marble in 1825, is still used for offices, although lack of space has made necessary the erection of other buildings flanking it on either side, and also used for the business of the several State departments.

Surface Features. In the southeast is a mountainous region comprising several parallel ranges varying from 2,000 to 3,000 feet in elevation, notably the Cumberland Mountains on the Virginia border and the Pine Mountains. Between these two ranges lies the Cumberland Valley, containing several cross ranges with peaks rising to a height of 3,500 feet. The section of the State lying east of a line drawn from Portsmouth on the Ohio River to the boundary between Wayne and Clinton counties on the Tennessee border, comprising an area of about 10,450 square miles, is commonly called "The Mountains." Physically it consists of a plateau, a northerly extension of the Cumberland Plateau of Tennessee.

North and west of The Mountains the outlying foothills give way to the famous blue-grass region, an undulating upland plain having an elevation of from 800 to 1,150 feet, intersected by deep valleys and embracing an area of more than 8,100 square miles. The blue-grass region is one of the richest pastoral districts in the world. Around this region on the east, south, and west is a strip of territory covering about 5,600 square miles, containing many conical sandstone hills or "knobs" from 300 to 400 feet high; the soil here is naturally thin and poor, but yields fair crops under careful cultivation. Farther to the south and east is a remarkable limestone plateau. On this plateau, as a result of the action of subterranean streams in cutting channels through the underlying strata of limestone, a great number of caves have been formed, the most famous being the Mammoth Cave, in Edmonson County, which extends over an area about nine miles in diameter and consists of chambers and connecting passages of marvelous beauty that are said to aggregate more than 150 miles in length.

Hydrography. The Ohio River extends along the whole northern border of Kentucky and is included within the jurisdiction of the State, under the terms of the deed of cession by which Virginia ceded its rights over the region north of the Ohio River. Of the commerce that plies upon the Ohio a considerable portion owes its importance to the shipments made or received at the wharves of the Kentucky towns along its banks. At the extreme western edge of Kentucky the State touches the Mississippi River. There is almost no commercial importance to be attached to this contact, however, for the Mississippi shore is low and swampy or forested along the greater part of this portion and there are no towns of importance on the Kentucky side of the stream.

In addition to the great border rivers, the State contains numerous large interior natural waterways, which with few exceptions, take their rise in the Cumberland Mountains and flow northward into the Ohio River. The Tennessee River empties into the Ohio at Paducah. The Cumberland River with 204 miles of navigable length in Kentucky reaches the Ohio at Smithland. The commerce of both of these is tributary to that of the Ohio. The Cumberland, Tradewater, and Green rivers penetrate to the coal and iron districts and are utilized for the cheap transportation of the products obtained there. The Kentucky River, flowing through a low canyon, is notable for its splendid scenery of gorge and cliff. Other streams are the Salt, Licking, and Big Sandy.

Climate, Flora, and Fauna. The climate of Kentucky is mild, although subject to sudden and sometimes severe changes in temperature. The mean annual temperature is about 55°. During the warm summer months the temperature rises above 90° very infrequently, and in the depths of winter it seldom falls below the zero point. Snows are frequent and sometimes heavy, but they do not often remain upon the ground more than a few days except in the upland portion of the mountainous area. Rainfall is ample and is well distributed over the whole area of the State.

A LANDSCAPE IN THE FAMOUS BLUE-GRASS COUNTRY

In Eastern Kentucky, in a broad belt extending over the limestone region from the Ohio River to the Cumberland, is the blue-grass country, which has far-reaching celebrity as the home of splendid breeds of horses and cattle. This section was once a forested region, but the woods were cleared away years ago and over the rich soil thus exposed grew a fine, close sod that has made the undulating farm land a wonderful grazing country and a place of beauty.

"TRAVELER'S REST," THE HOME OF GOVERNOR SHELBY

Governor Isaac Shelby was the first executive of the State of Kentucky. His home stands at a point about a mile east of Junction City. For many years the house was a stopping-place for parties moving westward from Virginia through the Cumberland Gap, and for this reason it became known as Traveler's Rest.

Mines and Manufactures. The mineral wealth of Kentucky consists mainly of the coal and iron in the eastern and western coal-fields. The eastern or Appalachian field has an area of about 11,200 square miles. The western field, although much smaller than the eastern, produces over half of the coal mined in the State. Iron ore is found in thirty-two counties, both within and without the coal-fields. The first ores worked west of the Allegheny Mountains were in Bath County, and from the ores of the lower Cumberland River region was made the first Bessemer steel manufactured in the United States. Petroleum of excellent quality is found in Eastern and Southern Central Kentucky, and there are productive areas of natural gas. Lead and zinc ores occur in the limestone region, but not in paying quantities. Salt has been obtained from brine springs and wells since the days of the early settlers. Considerable deposits of phosphate of lime occur in and around the blue-grass region and the stone quarries are valuable for their building stones.

In the volume of its product the most important industry in Kentucky is the manufacture of tobacco. The flouring and grist mill industry ranks second, a considerable export trade in flour having been developed. The manufacture of lumber and timber products adds annually large sums to the wealth of the State. Logging operations are conducted chiefly on the upper waters of the Cumberland, Kentucky, and Licking rivers, where the principal mills engaged in the industry are located. The making of various liquors, for which Kentucky has become noted, is still prosperous, though less so now than formerly. The product consists almost wholly of corn whisky, which is known to the trade as "Bourbon." The brewing industry is centered chiefly at Louisville. The meat-packing industry of the State also is important, Louisville being its chief point of activity.

Chief Cities. Louisville is the principal commercial and manufacturing center in the State and the largest leaf-tobacco market in the world. The city is situated at the falls of the

In the flora and fauna of Kentucky northern and southern species are mingled. In the eastern mountainous region the oak, elm, ash, tulip, and other well-known forest trees flourish; in The Barrens, the oak, chestnut, and elm; in the southwestern section lying west of the Tennessee River, the cypress, cottonwood, and pecan; and in the northern central stock-raising counties, the ash. The larger game animals have almost entirely disappeared. A few bears and deer are found in the wildest portions of the eastern mountains, and in the less settled regions many of the small wild animals. Game-birds are also numerous.

BOONES KNOB AND THE KENTUCKY RIVER

Eastern Kentucky is the classic land of Kentucky history of the period of pioneer settlement. Here Daniel Boone led bands of the hardy frontiersmen to the sites of new homes and shared the perils of warfare with the savage denizens of the "Dark and Bloody Ground." Boone's memory is rightfully cherished in the region of his exploits, and many natural landmarks perpetuate his name. Among them is Boones Knob, an eminence on the banks of the Kentucky River.

Agricultural Industries. Agriculture is the leading industry of the State and gives employment to more than two-thirds of the inhabitants. The soil of the State, as a rule, is of great fertility, whether formed by the decomposition of underlying rocks or by the deposits of streams. In the blue-grass region the soil is calcareous; south and west of it is a light-colored clayey soil; and in the belt of southern counties is a series of red soils In the upland sections of the eastern portion of the State the soils have a sandy character that makes them less desirable for agricultural purposes, but even here there are mountain recesses and river valleys with a fertility equal to that of any other section.

Corn, wheat, tobacco, oats, barley, hemp, flax, and hay are the staple crops that are grown within the State. Other crops are rye, sorghum, potatoes, and orchard fruits, such as apples pears, peaches, plums, and cherries. A small quantity of cotton is raised. Kentucky produces more than one-third of the tobacco grown in the United States, and about nine-tenths of the entire crop of hemp. The State is a recognized center for high-bred live stock, especially that from the stock-farms of the blue-grass country. Its race-horses are known the world over and those used for saddle and carriage purposes are unsurpassed. Special attention is given to the raising of mules, much used as draft animals. Excellent grades of sheep are raised and wool is an important product.

CLIFFS AT KENTUCKY GAP, ELLIOTT COUNTY

Ohio River, where a canal has been constructed around the rapids to permit the passage of vessels. Covington has rolling and cotton mills, tobacco factories, breweries, and other manufacturing establishments. Newport, opposite Covington, has rolling mills and foundries. Lexington, in the bluegrass region, possesses a number of State institutions and is the most important horse market in the State. Paducah, a flourishing industrial center, on the lower course of the Ohio River, has a large trade by rail and water and is one of the lumber markets of the State. Owensboro, on the

MOUNTAINEER'S HOME, IN KNOX COUNTY

More than a century ago pioneers built their rude homes on the western slopes of the mountains. Later migration sought richer country and the families that won the mountainside were left in possession. Here they have remained, changing little as the decades pass. Unlettered and poor, fierce in feud and reckless as to the law's restraint, they are survivals of a society that was typical of the nation's youth, but that has passed away outside of these mountain slopes.

COURT-HOUSE AT LOUISVILLE

Louisville possesses a commodious court-house which occupies a sightly location at the intersection of two of the principal streets of the city. A great clock-tower and several elaborate stone entrances set off its otherwise regular proportions.

Ohio River, is an important shipping point for agricultural products, and is one of the largest tobacco markets in the country. Henderson lies in the center of a rich area yielding corn, wheat, and tobacco, and has cotton and woolen mills. Frankfort is the capital of the State, but outside of its importance as such, also has a leading place as an industrial town. Bowling Green, on the Big Barren River, is an important educational center, and a leading market for horses, mules, and hogs, as well. Hopkinsville is also the site of important educational institutions, besides being the center of a large tobacco-growing district, whose shipments are made from this point. Ashland, on the Ohio River, is a shipping point for coal and iron, and has thriving metal-working industries.

Historical. The most famous, although not the earliest, of the American explorers of the region now included in Kentucky was Daniel Boone, who in 1769, with five companions, crossed the mountains from North Carolina. The first white settlement was made at Harrodsburg in 1774, and in 1775 Boone established a colony at Boonsboro. In the latter year the settlements were formally organized as the Colony of Transylvania, but this action was disallowed by the Virginia Legislature, which in 1776 constituted Kentucky a county of Virginia. Louisville was founded in 1778. During the Revolutionary War and after the colonists in Kentucky suffered greatly by the Indians' depredations.

Kentucky was made a separate Territory in 1790. In 1792, after no less than nine conventions within eight years had been assembled and organized to take the necessary preliminary steps toward statehood, the efforts of the people were finally crowned with success and Kentucky was admitted into the Union. In the War of 1812, and again in the Mexican War, Kentucky took an active part. When the Civil War broke out in 1861, Governor Magoffin, a strong sympathizer with the South, refused to honor the President's requisition for volunteers, and the Legislature approved his act. At elections held in the summer of 1861 it was apparent that a majority of the people favored the Union, and the prompt occupation of the State by Federal troops maintained the Union element in political ascendency Nevertheless, although the State never seceded, thousands of its citizens were found in the Confederate armies.

MAIN STREET WEST FROM NEAR THIRD, LOUISVILLE

Louisville, the largest city of Kentucky, is notable for the importance of the business interests established within its limits that are based on Kentucky resources. The commercial portion of the town is compactly built and regularly laid out with broad, paved streets. Main street, extending east and west parallel with the river, is one of the principal avenues of the city's trade.

OHIO

OHIO has an area of 41,060 square miles. On the north the State has 230 miles of shore line on Lake Erie, while the Ohio River extends for 446 miles along its southern and southeastern border. The State ranks fourth in population. The foreign-born element makes up about one-tenth of its people, the principal nationality being German, followed, in order, by Irish, English, Canadians, Hungarians, and Bohemians.

Physiography. The surface of the State is diversified by wide, fertile valleys, rolling hills, and, in some sections, rugged bluffs and highlands. The larger part is comprised within the lower Appalachian table-land, while portions of the western section belong to the prairie region of the Mississippi River Basin. The great divide that forms the water-parting between the basin of Lake Erie and that of the Ohio River crosses the State diagonally from the Pennsylvania border, at a point about fifty miles south of Lake Erie, to the Indiana line.

The northern slope of the State is drained by many streams, a few of which are known as rivers, but the greater number are little more than creeks. The principal rivers of this slope are the Maumee, the Portage, the Sandusky, and the Cuyahoga. The Maumee River, which enters Lake Erie near Toledo, is approximately 150 miles long, and in seasons of high water steamboats of light draft can ascend the river about fifty miles. The Portage River, about 100 miles in length, rises in Hancock County, emptying into Lake Erie at Port Clinton. The Sandusky River, 150 miles long, rises in Richland County, finally reaching Sandusky Bay. The Cuyahoga River, about 100 miles long, rises in Geauga County, and at Cuyahoga Falls passes through a narrow gorge, having a fall of 220 feet in a course of about three miles, then trending northward through a broad preglacial valley, it reaches Lake Erie at Cleveland.

PUBLIC SQUARE, CLEVELAND

The principal public square of Cleveland lies in the business district at the intersection of Superior and Ontario streets. Its most prominent feature is the great monument erected as a tribute to the memory of Ohio soldiers of the Civil War.

The principal rivers of the southern slope of Ohio are the Muskingum, the Hocking, the Scioto, the Little Miami, and the Miami or Great Miami. The Muskingum River, about 110 miles in length, drains the greater part of Eastern Ohio. It unites with the Ohio River at Marietta and is the most important navigable stream in the State, boats ascending to Dresden, a distance of ninety-five miles.

THE CAPITOL AT COLUMBUS

Columbus, platted in a central location by a town-site syndicate which offered to donate the public buildings, was accepted as State capital and in 1816 became the seat of government, superseding Chillicothe. The Capitol was first occupied in 1857.

Climate, Flora, and Fauna. The climate of Ohio is healthful but subject to great extremes and sudden changes. In the northern part of the State the winters are more severe and the summers much cooler than in the southern part. The mean annual temperature in the State is about 51°. The average annual rainfall is about thirty-eight inches, the

THE LAKE FRONT AT GORDON PARK, CLEVELAND

Just outside of the limits of Cleveland, on the eastern edge of the city, lies Gordon Park, named in honor of its donor. The park, a tract of land embracing about 120 acres, faces Lake Erie and is partly wooded. Boulevards connecting with the main avenues of the city make it easily accessible. Along the water front guarded by a breakwater of stone extends a magnificent driveway.

greatest precipitation occurring along the Ohio River, where the yearly average is nearly forty-one inches. Forests of oak, maple, yellow poplar, hickory, black walnut, and other valuable trees formerly covered the State, but these have now largely disappeared. In their place have sprung up forests of smaller areas and of less commercial value, the total wooded area being estimated as a little more than one-fifth of the area of the State. The wood-working industries of Ohio are only partially supported by the existing forests.

BALLAST ISLAND, BASS GROUP

Ballast, one of the minor islands of the Bass group, about one mile east of the larger islands, is an attractive spot, the beauty of its rock-fringed shore and swelling slopes of woodland scenery making it a pleasant residence place.

CLIFFS OF CATAWBA ISLAND, NEAR PORT CLINTON

An extensive peninsula on the Ohio shore of Lake Erie, a few miles east from Port Clinton, is crossed by a depression, part of which is marsh and all of which is flooded at times, making the extremity of the peninsula an island. This is Catawba Island. On its eastern side the island slopes gently down to the wide beach of the lake, but on its western side the rocks rise into low, picturesque cliffs, which attain in places forty feet or more in height.

With the destruction of the forests wild animals, such as the deer, wolf, bear, racoon, and fox, and other game have become very rare. Small game are found in abundance, and along the lakes and water-courses ducks and other aquatic fowl are seen in great numbers. The waters along the Lake Erie shore and in the rivers of the State abound in fish.

Agriculture. The leading and most profitable industry in Ohio is agriculture. Almost the entire State is arable, there being, it is estimated, less than 700 square miles of waste land. The central and southern counties produce a variety of cereals, besides flax, tobacco, and garden vegetables; the northern counties are especially adapted to grazing. The great grain-producing areas are in the alluvial valleys of the Miami, Scioto, and Muskingum rivers. On the bottom-lands of the rivers and on the prairies of the northwest large crops of corn are grown annually, Ohio ranking seventh in this production. Tobacco culture was introduced early, and the plant is now grown in nearly all the middle and southern counties. Other farm crops are oats, barley, rye, buckwheat, potatoes, hay, flax, sweet potatoes, and broom-corn. Dairying is carried on extensively. The slopes of the southern valleys, as well as the shore region and islands of Lake Erie, are well adapted to grape culture, while apples, peaches, pears, plums, and small fruits are cultivated throughout the State.

AT GIBRALTER ISLAND, PUT-IN BAY

Some faint resemblance, perhaps, to the famous fortress gave name to Gibralter Island, a rocky islet that rises abruptly from the waters and stands like a sentinel at the entrance to Put-In-Bay. One of its most attractive nooks is Rocky Pass, a snug retreat, enclosed by steep cliffs. The island was formerly the summer residence of a famous American financier.

Mineral Wealth. The coal area of Ohio is an extension of the great Appalachian coal measures, and coal beds underlie from 10,000 to 12,000 square miles in the State. Ohio coal is bituminous. The State ranks fourth as a coal producer, and in respect to the value of the coal stands third. Ohio contains two distinct oil-producing regions of large extent. The Lima district is by far the most productive area of the State, but the oil is inferior in quality to that of the eastern and southeastern district. In the latter region the fields are a part of the great Appalachian system. In the northeastern part of the State is a third oil-producing area, which yields a superior quality of lubricating oil. In the volume and value of its petroleum output, Ohio ranks first, its product amounting to more than one-third of the total production of the United States. Iron ores are found in the lower coal measures, but owing to the mining of ores of higher grade in the other parts of the United States, the annual output of the mines of Ohio has steadily decreased in recent years. Sandstone deposits cover more than one-half of the entire area. The great quarries of Cuyahoga and Lorain counties in the north are by far the most important. The stone is used for all classes of building and masonry. Limestone deposits are almost as widely distributed as those of sandstone, the two frequently overlapping each other. The clay deposits of the State are used largely for making pottery and earthenware.

Manufactures. In the value of its manufactured products Ohio ranks fifth among the States. The manufacture of iron and steel holds foremost rank among the industries of the State, and in this industry Ohio stands second to Pennsylvania. The manufacture of tin and terne plate is extensive. In the distillation of liquors Ohio holds a leading place, more than three-fourths of the product being manufactured at Cincinnati. The value of the output of malt liquors is even greater. The wine industry formerly flourished in the Ohio

Valley, but climatic changes have caused a transfer of the industry to the Lake Erie region, the most important centers now being near Kelleys and South Bass islands. The manufacture of tobacco, lumber and timber products and the industries of slaughtering and meatpacking are all important and center chiefly at Cincinnati. The characteristic product of the Ohio mills is hard-wood lumber. In the manufacture of clay products Ohio leads all the States. The manufacture of white ware, the most important branch of the industry, is carried on chiefly in East Liverpool, while Zanesville, Roseville, and Akron are important centers for the manufacture of yellow and earthen ware. Art tiling and pottery are manufactured extensively at Zanesville, and Cincinnati long has been an important center for the manufacture of art pottery. Brick and tile are manufactured chiefly at Zanesville and Canton. Many other branches of manufacture are carried on extensively, including the making of rubber and elastic goods, furniture, agricultural implements, and carriages.

Chief Cities. Cleveland, the largest city in the State and the seventh in the Union, is situated on Lake Erie at the mouth of the Cuyahoga River, and is the northern terminus of the Ohio Canal which extends to Portsmouth on the Ohio River. It is also one of the most important railway centers, and a notable receiving port for the lumber, iron, and copper shipped by the lake. Since the construction of the Sault Ste. Marie Canal, which greatly increased these shipments, the city has had a remarkable growth as a manufacturing center. Its leading manufacturing enterprises are iron and steel works, foundries and machine-shops, factories for electrical apparatus and supplies, iron and steel shipbuilding yards, and oil refineries.

SIXTH STREET MARKET HOUSE, CINCINNATI

Cincinnati, from the limits of which extend miles of fertile farming country contributing to the city's needs, retains the ancient institution of the public market. Where Sixth Street widens out into the Market Space there stands the Sixth Street Market House, a handsome building, its architecture recalling the angular outlines and high roofs of old Germanic towns.

Cincinnati, on the Ohio River, founded 1788, by 1820 had become one of the great trade centers of the interior. It holds a prominent place in the lumber trade, receiving the hard-wood products of Kentucky, Tennessee, and Alabama, and distributing them among the wood-working establishments of Ohio, Indiana, and Illinois.

Toledo, at the southwestern extremity of Lake Erie on the Maumee River, is a natural entrepôt for the coal, grain, and oil of Ohio and Indiana, a distributing point for the salt, lumber, and iron of Michigan. Columbus, the capital, on the Scioto River, is an important railway junction and is connected with the Ohio Canal by a branch from that waterway.

Dayton, on the Great Miami, has excellent transportation facilities; it is notable for the possession of various State institutions and for a large output of light mechanical devices. Youngstown, on the Mahoning River, is a leading center of iron and steel manufacture.

Akron, in the northeast, and Springfield, in the central portion of the State, are important manufacturing cities. Canton, in the eastern part of the State, in the center of a wheat-growing and coal-producing section, has many manufactories of metal goods.

CONNEAUT HARBOR

Crowded, in the carrying season, with the great freighters of the lakes, Conneaut Harbor is a typical port of the inland seas. It is a notable shipping place for the Appalachian coal-fields and a receiving point for Lake Superior ore cargoes.

Historical. The settlement of Ohio began in the eighteenth century, when French missions and trading-posts were first established along the southern shores of Lake Erie and in the valleys of the Sandusky and Maumee rivers. The first English exploration of Southern Ohio was made in 1750 under the management of the Ohio Company, and in 1750–51 English traders located themselves on the Miami River. The French broke up the English trading-post in 1752, and built fortified posts on French Creek, and at Venango, situated at the confluence of that stream with the Allegheny. By the treaty of peace signed in 1763 France relinquished to Great Britain practically all of her dominions in North America east of the Mississippi.

By the treaty of peace with Great Britain, at the close of the Revolutionary War, the Ohio Valley passed to the United States. By the Ordinance of 1787, the Northwest Territory was organized, comprising all the possessions of the United States northwest of the Ohio River. In 1800 Congress divided the Northwest Territory. Permanent settlement in Ohio began at the mouth of the Muskingum River in 1788. Serious Indian troubles were ended when General Wayne, in 1794, defeated the Indians in a great battle at the rapids of the Maumee. On November 29, 1802, a State constitution was adopted, and Ohio soon entered the Union. The seat of the State government, removed in 1809 to Zanesville and later returned to Chillicothe, in 1816 was located permanently at Columbus. Near Put-in-Bay, during the War of 1812, Commodore Perry won his famous naval victory over the British at the battle of Lake Erie.

INDIANA

INDIANA has an area of 36,350 square miles, including 440 square miles of water surface. The State's extent of shore line on the north is sixty miles. Had the exact provisions of the Ordinance of 1787 been carried out, even this short water frontage would have been denied, that document making the parallel extending through the point of the lake the northern boundary of Indiana. For commercial reasons, however, the line was changed. The foreign-born inhabitants of the State constitute five per cent of the total population, and the colored element is a little more than two per cent.

Surface. Indiana occupies a table-land with an average elevation of 735 feet, sloping southwest. The highest land, an extension of the Allegheny Plateau, is in Randolph and Wayne counties, near the eastern border of the State, where an elevation of about 1,250 feet is attained. The configuration of the State is due largely to glaciation, which has covered most of the surface with drift to such an extent as almost to conceal the natural rock reliefs. In the driftless region extending south from Brown and Monroe counties and widening out along the Ohio River, the surface is very rugged and is broken by many ridges with narrow intervening valleys in which the streams are sometimes 200 or 300 feet below the level of their divides. In the limestone belt in the south the rocks have been honeycombed by underground streams, producing many sink-holes and caves. In some cases the underground rivers have been turned from their courses, their channels forming caves, of which the most remarkable examples are Wyandotte and Marengo caves in Crawford County.

Hydrography. About 4,000 square miles in the northern part of Indiana are drained to the Great Lakes. The remainder of the State is included in the Mississippi River basin. The rivers north of the divide are the Calumet, which parallels the southern shore of Lake Michigan westward into Illinois, together with the Elkhart, Pigeon, St. Joseph, and St. Marys. The Wabash is the great river of Indiana. From its source in Ohio it flows northwestward into Huntington County, Indiana, where it changes its direction, thereafter flowing generally southwestward. It has a course of about 600 miles, of which 500 miles are in Indiana. Below Terre Haute the valley widens and the river has a sinuous course strongly resembling that of the lower Mississippi River. The Wabash is navigable for about 300 miles from its mouth. The Ohio River, into which all the large streams of the State are drained, forms the boundary line for about 380 miles. Of the numerous streams that carry into it the drainage of the southern tier of counties, all have short, rapid, and unnavigable currents. The bed of the Ohio here is from one to five miles wide, and bordered through a large part of its course by high bluffs.

THE STATE HOUSE AT INDIANAPOLIS

The site of Indianapolis, centrally located on a navigable stream, and close by the great highway leading to the western country, was selected and surveyed by State commissioners as the most desirable place for the State's capital while it was yet forested wilderness. In 1842 the public offices were removed from Corydon to the site so selected, where a new town by that time was growing. The State House of to-day, a handsome structure constructed of Indiana limestone, was completed in 1888.

THE BATTLEFIELD OF TIPPECANOE, NEAR LAFAYETTE

About seven miles north of Lafayette is the scene of the famous battle of Tippecanoe, by which, in 1811, General Harrison broke the hostile power of Tecumseh's great Indian confederation. Harrison's forces were attacked in the early morning hours while encamped upon this spot, but were prepared against surprise and gave the enemy a crushing defeat. The ground now forms a State Park, in the midst of a beautiful rural landscape.

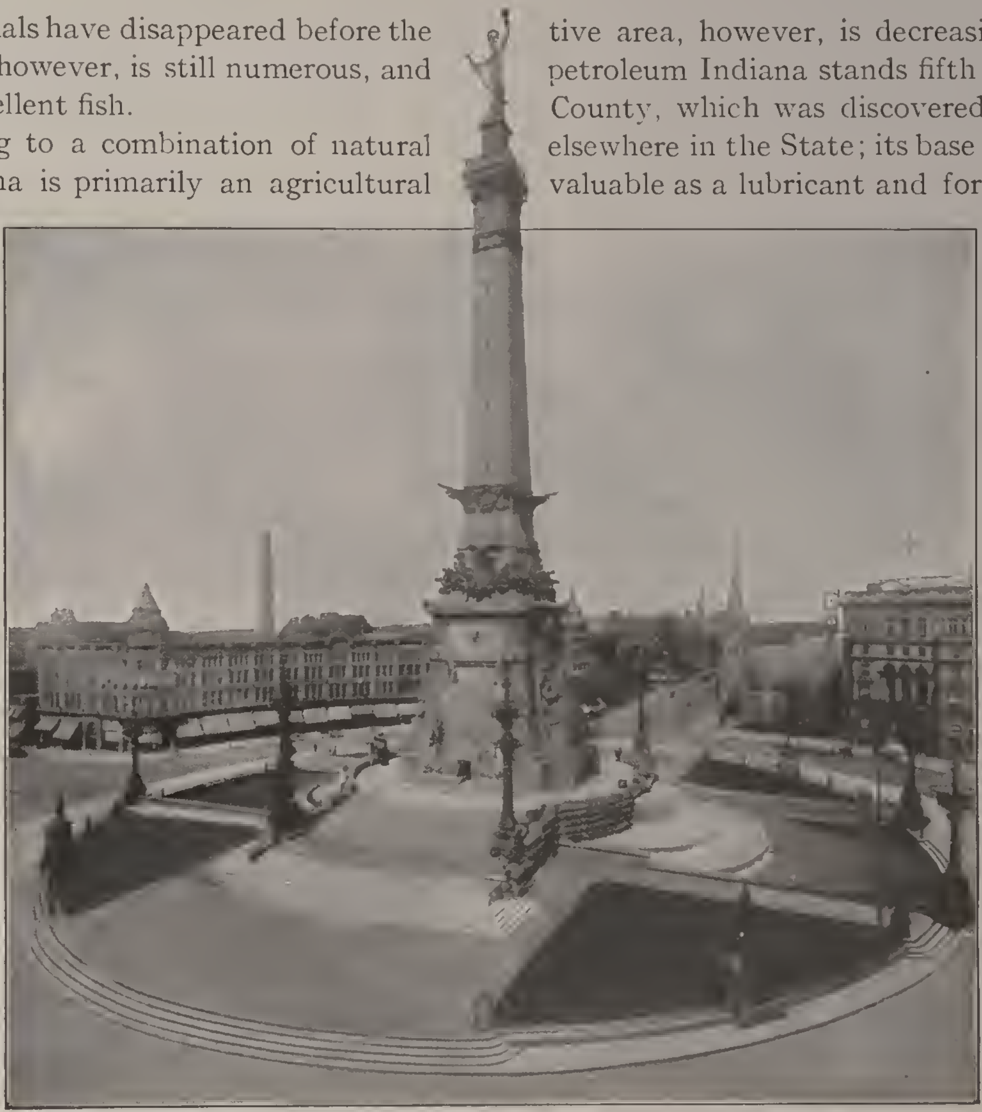
Climate, Flora, and Fauna. The climate of Indiana, as of all the interior States, is subject to sudden changes, but is, in general, salubrious. Extremes of heat and cold are great, especially in the north. The average temperature for the year is about 53°. Except in midsummer, when dry southwesterly breezes prevail, the winds blow usually from the north and northwest. Indiana lies directly in the path of the cyclonic storms and cold waves that sweep diagonally across the greater part of the continent. The cyclonic storms bring abundant moisture, which is well distributed throughout the seasons.

Originally almost the whole of the present State was covered with deciduous forests that were especially dense in the southern half of the State. Large areas, however, already have been denuded of trees, and the supply of timber is diminishing. In the existing forests the beech and oak are most abundant, but other common trees, as sugar-maple, hickory, ash, and black-walnut, abound. As in other sections of the

country, the larger species of wild animals have disappeared before the advance of settlement. Small game, however, is still numerous, and the waters of the State abound in excellent fish.

Agricultural Resources. Owing to a combination of natural conditions of soil and climate, Indiana is primarily an agricultural State. The bulk of the soil is clay, generally mixed with enough fine sand and gravel to make it workable. The richest lands are the alluvial bottoms of the Wabash, White, and Whitewater rivers, but with the exception of some marshy country in the north, there is little land in Indiana that is not either cultivated or devoted with success to stock raising and dairy farming. Corn and oats are the principal cereal products. Other important farm products are wheat, barley, rye, potatoes, hay, and tobacco.

Apples, pears, plums, peaches, and small fruits are cultivated extensively, the peach orchards of the southern part of the State being especially valuable. The raising of vegetables is yearly increasing in importance. The State is the leading producer of tomatoes among those commonwealths located west of the Allegheny Mountains. The dairying industry also has reached an advanced development, owing to the great acreage of cleared grazing lands in the State. Sheep raising is largely confined to the northeastern part of the State and seems not to be increasing. Other varieties of stock, however, are being bred in increasing number. Poultry raising is an important adjunct of agricultural work.



SOLDIERS' AND SAILORS' MONUMENT, INDIANAPOLIS

Mineral Wealth. The coal-fields of Indiana, an extension of the Illinois bituminous coal-measures, occupy an estimated area of 6,450 square miles in the southwest, extending east into Crawford County and northward into Warren County. Indiana now stands sixth among the States in the amount of its production of coal. As a producer of natural gas Indiana stands next to Pennsylvania. The discovery of this valuable fuel, almost ideal in its cheapness and cleanliness, was made at Portland in 1886. The gas-fields are situated in the eastern central section of the State. The productive area, however, is decreasing annually. In the production of petroleum Indiana stands fifth among the States. The oil of Jasper County, which was discovered in 1900, differs from that produced elsewhere in the State; its base is asphalt instead of paraffin, and it is valuable as a lubricant and for fluxing with asphalt.

Indiana is an important producer of limestone. The Bedford oölitic stone, noted for its durability, is found in a belt about five miles wide extending from Putnam County south along the eastern edge of the coal-fields to the Ohio River. In the upper valleys of the Wabash River and its tributaries and in the southeastern part of the State are large quarries of crystalline limestone, chiefly of the Niagara formation. The coal-fields at the southwest contain massive deposits of sandstone, which is quarried for heavy structural purposes.

Manufactures. The prominence of manufactures in Indiana during the past two decades has been due largely to the development of the natural resources of the State, to the proximity of producing centers to large markets, and to the excellent transportation facilities afforded by railways and navigable waterways. The productions of greatest value are slaughtered and packed meat, flour, liquors, lumber and timber, iron and steel, foundry and machine-shop products, glass, carriages, and wagons.

The meat-packing industry, which is centered chiefly at Hammond, in the northwestern part of the State, is the most important. Second comes the manufacture of flouring and gristmill products. The making of liquors ranks third in the total value of its product, and the latter is increasing largely. The value of lumber and timber products holds the fourth place in the manufactures of the State, next to which come the iron and steel products, the latter increasing enormously in recent years, although Indiana is dependent upon other States for its supplies of metal. In the natural gas field several manufactories for tin and terneplate have been established.

QUARRY NEAR TERRE HAUTE

Vigo County, in which Terre Haute is situated, possesses quarries of sandstone, the rock occurring in strata of great thickness resting upon shale formations. Extensive operations have been conducted on the west side of the Wabash Valley.

WASHINGTON STREET, INDIANAPOLIS

The capital city and metropolis of Indiana is noted for the beauty of its streets, which, outside of the business district, are shaded with rows of maples and elms. Within the realm of business the principal thoroughfare is Washington Street, devoted to retail trade. Its width of 120 feet makes it broader than any other avenue and gives its vista a very sightly effect. Lined with mercantile places and passing near to important public buildings, it extends eastwardly from the river across the city.

The manufacture of glass is an important industry. It is claimed that the first plate-glass made at a profit in the United States was manufactured at New Albany on the Ohio River. A number of other cities are now engaged in this industry, all situated in the natural-gas region, where abundant supplies of inexpensive fuel, possessing the advantage of freedom from sulphur, have attracted many plants from other States. Large shipments of glassware are made abroad.

Chief Cities. Indianapolis, the capital, situated at the junction of Fall Creek and White River, was first settled in 1819, and ranks among the most important railway centers in the Central States, while from its manufactories are turned out engines, cars, malleable iron, tile, terra-cotta, car wheels, bicycles, woodenware, steel goods, and provisions. Evansville, the second city in size, is situated on the Ohio River. It is a port of entry and, being connected with the entire coal area of Indiana by railway, is actively engaged in industrial and mercantile pursuits.

SCENE AT TURKEY RUN, PARKE COUNTY

The scenery of Parke County possesses much beauty, owing to the presence of many ravines and gorges that have been cut by the tributary streams of the Wabash in seeking to reach the lower level of the river. Along the bluffs and valleys of this section are ancient terraces and deltas formed in the Glacial Epoch.

Other cities of importance are Fort Wayne, at the head of the Maumee River, a great railway center and an important point for the manufacture of wagons, furniture, iron, electrical apparatus, and beer; Terre Haute, near the block coal mines of Clay County, which have fostered its manufacturing industries; South Bend, at the head of navigation on the St. Joseph River, containing one of the largest establishments in the world for the manufacture of wagons and plows; Muncie, in the gas district, a thriving mercantile and manufacturing town; and New Albany, on the Ohio River, containing one of the largest glass factories in the country.

GULF OF LOST RIVER

Near Orangeville, in Orange County, is the "Gulf" of Lost River, a stream which suddenly disappears from sight by entering an underground passage beyond which point its course is unknown.

Historical. The French from Canada were the first white visitors to the territory now included in Indiana. In 1702 a party of French Canadians under Captain St Vincennes descended the Wabash River and established the trading-post of Vincennes, which later came to be the most important military station between the Mississippi River and the Allegheny Mountains. In 1763 the country passed by treaty into the hands of the English. Later, by the treaty of peace between the United States and Great Britain in 1783, and the deed of cession executed by Virginia in 1784, it became a possession of the United States.

Under the Ordinance of 1787 Indiana became a part of the Northwest Territory. Trouble with the Indians culminated in 1790 in an effort to force them to submission, and in 1794 Gen. Anthony Wayne crushed the confederated tribes in a great battle at the rapids of the Maumee River in Ohio. A year later General Wayne negotiated a treaty of peace at Greenville, by which the savages of the Northwest Territory surrendered to the Government the greater portion of their lands.

In 1800 Indiana Territory was organized. It included all the Northwest Territory west of a line drawn from the mouth of the Kentucky River north to the Canadian boundary. The present limits of the State of Indiana were defined through the erection of Michigan into a separate Territory in 1805 and of Illinois in 1809. General William Henry Harrison, who subsequently was elected President of the United States, was the first territorial governor of Indiana. In 1811 the Shawnee Indians and their allies were incited to war by the Shawnee chief Tecumseh and his brother, the prophet of the tribe, but their power was crushed by Governor Harrison at the battle of Tippecanoe. Tecumseh was killed in 1813 and by 1815 the Indians ceased to disturb the settlers and an era of prosperity began. In April, 1816, Congress authorized the admission of Indiana into the Union as a State. In the following June a constitution was adopted, and in December Indiana became formally a member of the Union.

AN INDIANA FARM PANORAMA, NEAR COLUMBIA CITY

ILLINOIS

ILLINOIS, originally a part of the Northwest Territory, has an area of 56,650 square miles, of which only 650 square miles are water surface. Its shore line on Lake Michigan is about sixty-five miles in length. The State ranks third in the number of its inhabitants, being surpassed only by New York and Pennsylvania The foreign-born element of the population constitutes one-fifth of the whole. The urban population is more than one-half of the entire enumeration of the State.

Physiography. With the exception of Louisiana and Delaware, Illinois is the most level State of the Union. It occupies the lower half of an inclined plane, of which Lake Michigan and its shores are the elevated portion, the level of Lake Michigan being 582 feet above the sea. The surface of the State is slightly rolling and somewhat broken along the rivers. In the northwest corner, in the lead and zinc region, it is more or less hilly, and in the extreme south there is a low, mountain-like ridge. Two-thirds of the area of the State, comprising the northwestern section, is drained by the Illinois and Rock rivers, which flow into the Mississippi, while the southeastern section sends its surplus water into the Wabash and other streams. The Illinois River, formed by the junction of the Kankakee River and the Des Plaines, has a wide, deep channel, which spreads out in some places into broad, lake-like expanses. It is navigable for 245 miles. Between the river and Lake Michigan are two parallel canals—the Illinois and Michigan Canal, extending a distance of about 100 miles, from Chicago to La Salle, now practically fallen into disuse, and the Chicago Drainage Canal, carrying the waters of the lake to the Des Plaines River near Joliet, thus disposing of the sewage of the city of Chicago. Rock River, a tributary of the Mississippi, has a course of 300 miles, most of which lies across the northwestern corner of the State, its upper waters being marked by rapids. Three other important streams are the Kaskaskia, the Sangamon, and the Embarras. The first nearly parallels the Illinois through a course of 250 miles and unites with the Mississippi at Chester, the second empties into the Illinois near Beardstown, and the last discharges its waters into the Wabash.

THE STATE HOUSE AT SPRINGFIELD

Partly to its central location in the State, but much more to the activity of those energetic citizens who donated money and land for public buildings, Springfield owes its rank as the capital city of Illinois. Legislative sessions began to be permanent here in 1839. The present State House, long in course of construction, was in 1877 completed sufficiently for partial occupation by the State officials.

Climate, Flora, and Fauna. The climate conforms to latitude and the seasonal changes, excepting in the northeastern portion, where the waters of Lake Michigan absorb the midsummer warmth to surrender it during the Autumn. The climate on the whole is salubrious. Observations at the fortieth parallel, which bisects the State, show the mean temperature for the summer season to be 77°; for the winter 33° is recorded.

Nearly one-sixth of the surface of the State is covered with forests, mainly along the streams and in the southern portion, in which section the principal part of the forested area, not included in farms, may be found. In the eastern and southern sections are yellow poplar and beech; near the Ohio, yellow pine and cedar are found in clumps; and in the bottoms are cottonwood, buttonwood, and other species that flourish in extremely moist soil. Other familiar forest trees are found in various sections. The cultivated fruits include the apple, peach, cherry, pear, plum, and grape, all of which are grown in profusion. Corn is indigenous to the State, as it is to all the Central West, the soil usually being so rich that it may be grown without fertilizing.

Native wild animals are almost extinct, but small game is found in many sections. Bass and other fish abound in the streams, especially in the numerous small lakes in the northern part of the State, which are frequently restocked with fish artificially hatched.

Agriculture. The surface of the Illinois prairies is deep, fertile free from stone, and produces a luxuriant growth of native grasses and other vegetation. The low ridge that crosses the southern portion of the State constitutes the chief fruit belt of Illinois. Tree and small fruits, in great variety, are produced in profusion, and owing to its almost never-failing fruitfulness, this long has been one of the most important horticultural districts of the country. In the bottoms, or alluvial borders of the rivers, the soil is chiefly formed by the deposit

FARMING COUNTRY IN OGLE COUNTY, ALONG THE COURSE OF ROCK RIVER

Near Oregon, in Ogle County, is the great Sinissippi Farm, one of the largest tracts under single ownership in the State of Illinois. Its name is derived from the Indian appellation of the Rock River, which flows across the land. The view from Wolf Hill across the great estate reveals a typical bit of the scenery of Northern Illinois. The gentle rolling surface is checkered by broad fields and diversified with charming stretches of woodland through which curve miles of attractive drives disclosing here and there a glimpse of the winding river.

of sediment carried by the waters during floods, and is of inexhaustible fertility. Some of these bottom lands have been diked, but there yet remains a considerable area subject to overflow, that renders it unfit for agricultural purposes, although it is covered with a heavy growth of timber. The southern and middle sections of the State, producing corn, fruits, and wheat, are more undulating in character but exceedingly productive; in the northern portion corn, oats, hay, and potatoes constitute the staples. Illinois ranks among the very first of the States in its agricultural products. Its annual product of corn, oats, wheat, and hay is very large. It is the chief corn and oats growing commonwealth, and is the fourth in its hay product. In farm animals also—cattle, horses, milch cows, swine, and sheep—Illinois holds a high position, with few of the States in advance.

THE MASSACRE MONUMENT

Mines and Manufactures. In mineral resources Illinois is second to Pennsylvania in the production of bituminous coal, while the lead mines of Galena, the various quarries of limestone and other building stone, make the mining interests of the State of value and importance. Fully three-fourths of the State is underlaid by coal fields. Iron ore has been found in the coal measures, but it has little value. The best veins of the enormous coal deposits are from six to eight feet thick, and there is no other area in the world, of equal extent, where good coal can be mined so economically. Fire and porcelain clays are abundant, and in their products the State ranks fourth.

Situated in the heart of the continent, in immediate touch with the great natural arteries of trade, and in easy proximity to inexhaustible supplies of coal and other materials requisite for industrial development, Illinois has not only become a distributing center for a vast interstate traffic, but has likewise acquired third place among the States as a manufacturing community. The leading industry, slaughtering and meat-packing, is centered chiefly at Chicago, the great live-stock market for the West and Northwest. Next comes the product of foundries and machine shops. Owing to easy water transportation from the iron mines of the Lake Superior region and to the proximity of coal supplies, the iron and steel industry is prominent. Illinois now leads all other States in the making of agricultural implements, also in meat-packing and the distillation of spirits, and is second in production of open-hearth steel.

City of Chicago. Chicago was incorporated in 1837, and is now the second city in size in the United States, ranking fifth among the great cities of the world, being exceeded only by London, New York, Paris, and Berlin. Its original site upon Chicago River had an elevation of only a few feet above the level of the lake. By successive annexations the area of the city has been so extended that it now includes over 190 square miles within its limits. Much of the extended area has been artificially raised, and has been so improved that it is now from fourteen to twenty-eight feet above the lake level, while the river has been widened and deepened until it has become the best and largest harbor on the Great Lakes. Within the limits of the city are two navigable rivers, the Calumet in the extreme south, and the Chicago, extending through the most populous portions of the city, which together afford nearly forty miles of dockage capable of accommodating the shipping that contributes to the tonnage of the largest inland grain and lumber fleets in the world. Chicago is the most important

THE LAKE SHORE DRIVE, CHICAGO

Back a little way from the massive sea-wall that protects the margin of Lake Michigan on the North Side of Chicago is the Lake Shore Drive, a splendid residence street. On its west side is a succession of mansions, some of palatial character. On the eastern side is a narrow park, and beyond this the lake.

MICHIGAN AVENUE, CHICAGO

The eastern edge of the downtown business district of Chicago follows the line of Michigan Avenue, along which are immense hotels and office buildings, facing the open space of the Lake Front, and forming an impressive and pleasing picture.

THE HAYMARKET, CHICAGO, FROM THE CORNER OF DES PLAINES STREET

Somber memories cling about the Haymarket square, in Chicago, a portion of Randolph Street long used as a public market. Here in 1886 occured the riots during which a number of policemen met their death through the explosion of a bomb thrown by an anarchist, the first practical expression in the United States of the anarchists' war against the existing social system.

railroad center in the United States, and the greatest grain, live stock, lumber, and provision market in the world. The city has a splendid park system, Lincoln and Jackson parks, situated on the shore of the lake, having national reputation. The city water supply is pumped into the mains from stations situated far out in Lake Michigan.

EASTERN ILLINOIS NORMAL SCHOOL, CHARLESTON

At Charleston, in Coles County, is one of the most recently erected of the state normal schools of Illinois, situated upon a forty-acre tract that adjoins the city on the south. The architect who designed the building chose the German gothic style and secured most effective results from an artistic point of view. From a little distance the castellated towers rising amid the trees make a most attractive picture.

Other Cities. Peoria, the second city in size in the State, is situated on the west bank of the Illinois River. It is in the midst of the bituminous coal-fields and is the center of a large number of railway lines. The city has the largest distilleries in the United States, while among other flourishing industrial establishments are included large glucose works and iron works. Quincy, picturesquely situated on a bluff above the Mississippi River, is an important manufacturing center, pork packing and grain shipping being among its chief industries. Springfield, the State capital, situated on a prairie five miles south of the Sangamon River, in the vicinity of extensive coal-fields, has many important industrial enterprises, notably the making of watches and machinery. Owing to the productiveness of the surrounding country and its shipping facilities it has also a large trade.

Rockford, situated on both sides of the Rock River, has excellent water-power and railroad facilities, and among its varied industries are included the manufacture of furniture, woolen goods, agricultural implements, and watches. East St. Louis is on the Mississippi River, opposite St. Louis, with which it is connected by bridge, and adjoining the city are the National Stock Yards, one of the three largest cattle and horse markets in the world. Joliet, on both sides of the Des Plaines River and the Illinois and Michigan Canal, has abundant water-power for its many manufactories, and near it large quarries of blue and white limestone are worked.

SPILLWAY ON THE CHICAGO DIVIDE

Just outside of Chicago is the low divide that separates the basin of the Great Lakes from that of the Mississippi. Where the Des Plaines River, an affluent of the Illinois, touches the divide a spillway has been built that turns the flood waters of the river toward Lake Michigan.

Historical. A large part of the territory now included in Illinois was occupied by several warlike tribes of Indians when, in 1675, Father Marquette first visited the country and established a temporary mission where Utica now stands. In 1682 La Salle built Fort St. Louis on the summit of Starved Rock. La Salle also made the first permanent settlement at Cahokia, and soon after a colony was established at Kaskaskia. This territory, with all of the country situated east of the Mississippi River that was claimed by France, passed into the hands of the British at the close of the French and Indian War in 1763, and remained British until Fort Gage, at Kaskaskia, was taken by Col. George Rogers Clark with Virginia troops in 1777. In 1803 the Americans built a fort on Lake Michigan at the mouth of the sluggish Chicago River and named it Fort Dearborn, in honor of the Secretary of War. Upon the outbreak of hostilities in 1812, the commander of this fort was ordered to evacuate, if he was not in a position to hold the place. While retiring, this force was attacked by a band of Pottawatomies, and about fifty were massacred. The fort was burned and the region was abandoned until 1816. Illinois Territory was formed in March, 1809, with Kaskaskia as its capital.

Illinois, with its present boundaries as a State, was admitted to the Union in 1818. Trouble with the Indians culminated in the Black Hawk War of 1832, which was followed by a permanent peace that stimulated immigration from the East. Prior to the War of Secession the State became famous politically as the scene of the rivalry of Douglas and Lincoln, a struggle that made prominent the popular feeling over the differences which brought about the Civil War. Lincoln became President and Illinois supported the war, until it was closed by the genius of Grant, also an Illinois man. The chief event of national interest after the war was the great Chicago fire in 1871.

STARVED ROCK, ON THE ILLINOIS RIVER, LA SALLE COUNTY

A huge isolated rock overlooking the Illinois River about midway between the cities of Ottawa and La Salle, is famous as the site of Fort St. Louis, established by the explorer La Salle in 1682 to hold the valley as French territory. It has also romantic interest due to an old Indian legend that upon the summit of the rock a band of beleaguered tribesmen, cut off from food and water, slowly starved rather than yield and suffer the fate meted out to prisoners of war.

MICHIGAN

MICHIGAN is one of the northern border States. Isle Royal, an island of 225 square miles in area, lying off the extreme northeastern part of Minnesota and only fifteen miles from the shore of Canada, is included within its limits. The area of the State is 58,915 square miles, with 1,485 square miles of water surface, exclusive of the share which Michigan has in the Great Lakes. The population, during the early period of growth, came chiefly from Ohio, New York, and New England. Large numbers of Canadians now live in the State.

THE CAPITOL AT LANSING

The site of Lansing was a wilderness when it was selected as the place for the seat of government of Michigan, but it was more centrally situated and less exposed to attack from Canada than was Detroit, the earlier capital. Another advantage lay in the fact that the land was already the property of the State. A town was laid out by the State commission, and in 1847 the State offices were removed to the new location. The present Capitol, first occupied in 1879, is an attractive building, situated within a large park.

Surface Features. By the Straits of Mackinac, which connect Lake Michigan with Lake Huron, the State is divided into two sections — the Upper or Northern and the Lower or Southern Peninsula. The Upper Peninsula is very irregular, especially in the west. The eastern half is comparatively level. The western part consists mainly of undulating ground, broken by hills. A range of mountains known as the Copper or Mineral Range, having a maximum altitude of about 1,400 feet, extends from Keweenaw Point southwestward into Wisconsin. The Lower Peninsula is 277 miles in extent from north to south and 259 miles in extreme width. A divide, varying from 100 to 1,000 feet in altitude, extends very irregularly through this part of the State from north to south and gives general direction to the drainage into the eastern and western basins of the peninsula. The Lower Peninsula has no mountains, and the entire surface of the country is gently undulating.

The principal rivers flowing from the Upper Peninsula into Lake Superior are the Presque Isle, Ontonagon, Sturgeon, and Tahquamenon; into Lake Michigan, the Menominee, as a part of the southwestern boundary, the Ford, Cedar, Escanaba, Whitefish, Sturgeon, and Manistique; into Lake Huron, the Carp and the Pine. The Sturgeon River empties into Portage Lake in the northeastern part of Houghton County. Portage Lake, although only about twenty miles long and from two to three miles wide, is of great value to navigation. Portage River connects the southern end of the lake with Keweenaw Bay on the east, and a ship canal about two and one-half miles long and 100 feet wide extends from the northern end to Lake Superior on the northwest. Of the streams of the Lower Peninsula, those flowing into

INDIAN FISHERMEN SPEARING IN THE RAPIDS OF THE ST. MARYS RIVER

Some distance below the great International Bridge which stretches across the river at Sault Ste. Marie, connecting the city of the American shore with that opposite on Canadian soil, the hastening stream spreads out into a wide sheet of tumbling rapids, marked by whitened waves, the result of hurrying waters dashing themselves against hidden rocks. Near the American shore the waters are shallow, affording a clear view of the bed of the river, and here is a splendid fishing ground. In olden times it was the resort of Indians, who plied their stone-pointed spears from birchen canoes. Now their civilized but unpicturesque descendants, equipped with modern boats and tackle, reap here the harvest that enables them to win a prosaic profit at the neighboring city's fish-mart.

UNIVERSITY HALL, ANN ARBOR

The University of Michigan at Ann Arbor, founded in 1837, is one of the most famous educational institutions of the Central West. Among the many splendid buildings that ornament its campus is University Hall, the principal one of those devoted to academic work. On its lower floor are the administrative offices of the University, and above them a large auditorium.

Lake Michigan are the Manistee, Muskegon, Grand, Kalamazoo, and St. Joseph rivers; into Lake Huron, the Cheboygan, Thunder Bay, Au Sable, and Saginaw; into Lake Erie, the Huron and Raisin. Throughout the State are also many small streams and swamps. Although the streams usually are not large enough to be navigable they afford ample water-power and are especially valuable for transporting the logs down from the lumber districts. A very great number of small lakes and ponds of glacial origin are scattered over the face of the country.

ROCK MASSES AT POINTE AUX BARQUES

Early French explorers of the Great Lakes found and named Pointe Aux Barques. Here a wild and rock-bound coast fronts savagely toward the inland sea called Lake Huron, threatening seamen with a danger whose reality is proven by the presence of a life-saving station. The picturesque beauty of the place has made it one of the popular summer resorts of Michigan.

Flora, Fauna, and Climate. The great northern forest belt of the United States crosses Michigan and covers a large part of its area. A considerable section of the Lower Peninsula was covered originally with white-pine forests, but these have been largely cut down for lumber or devastated by fire. At present the chief growths are sugar-maple, beech, oak, birch, ash, elm, spruce, hemlock, and poplar or aspen. In the Lower Peninsula, besides the above-named varieties, there are found many others. The extensive forests contain much of the wild game common to this latitude, and the multitudinous small lakes and streams abound in food-fishes of many varieties. The adjacent Great Lakes afford an almost inexhaustible supply of whitefish, lake-trout, sturgeon, bass, and pike.

The climatic conditions of the northern and southern sections of the State are dissimilar, due not only to their inequalities of latitude but also to their different relations to Lakes Michigan and Superior. The mean annual temperature at Detroit is about 47° and at Sault Ste. Marie about 40°. The winters of the Upper Peninsula are very severe, but those of the Lower Peninsula are comparatively mild. The influence of Lake Michigan largely determines the temperature and the rainfall of the southern section. Thus there is a copious rainfall in summer, and in winter abundant snows protect the ground from freezing to any considerable depth. Throughout a belt about ten miles wide, contiguous to the lake, fruit is seldom injured by frost.

Agricultural Industries. The soil of the Upper Peninsula generally is not well adapted to farming, although fair crops of hay, fruits, vegetables, and all grains except corn are raised. The soil of the Lower Peninsula, except in the northern part, is very fertile. Much of the swamp-land has been reclaimed by drainage. The southern counties produce the best varieties of wheat, corn, hay, and oats. Here also is the famous fruit belt, where large quantities of peaches and small fruits are grown. Apples of a superior quality are raised over a large area. In the amount of its potato crop the State now ranks second to New York. The muck-strewn soil of the swamps when properly drained yields immense crops of the finest cranberries and large quantities of choice celery and peppermint. Soil and climate favor the production of the sugar beet, and Michigan is second among the States in the manufacture of beet-root sugar. The flax plant is raised now in many parts of the Lower Peninsula, and the preparation of the fiber and the manufacture of linseed oil from the seed is carried on in a number of factories. The chicory plant is grown; its roots, when dried and ground, become the chicory of commerce. Allied to agricultural interests is the grazing industry. Michigan is one of the leading sheep-owning States of the Union.

Forests. The lumber industry still holds a foremost place among the great and profitable enterprises of Michigan. The forest lands comprise about two-thirds of the total area of the State. The forests of white pine, however, though originally the most extensive wooded areas in the State, have been greatly reduced by more than fifty years of lumbering. The most valuable forests of this pine remaining are in the Lower Peninsula. In this section the chief lumber ports are Bay City, Cheboygan, Manistee, Ludington, and Muskegon, situated at the outlets of extended valleys, down the streams of which the forest products find their way to navigable waters. The lumber trade of the Upper Peninsula, with its chief centers at Menominee, Escanaba, and Manistique, is increasing. In 1901 the Legislature of Michigan adopted the policy of setting aside certain lands as forest reserves, in order to secure protection for the forests and to regulate lumbering.

Mineral Wealth. Next in rank to the lumber interests are those of mining. Silver is found in the copper region, but the yield of the metal is comparatively small. Isle Royal and the western part of the Upper Peninsula contain rich deposits of pure copper, and the amount produced is exceeded only in Montana. Michigan is, excepting Minnesota, the leading State in the production of iron ores. In the Upper Peninsula the deposits are extensive and of superior quality. The State ranks second as a producer of red hematite or common iron ore; it ranks fifth in magnetite

THE ST. CLAIR TUNNEL, PORT HURON

One of the most important submarine tunnels in the world is that which extends under the St. Clair River at Port Huron, providing direct railway connections between Michigan and Canada. The tunnel is 6,000 feet in length and its excavation through soft clay was attended with such peculiar difficulties as to make the work a notable piece of engineering skill.

ores, which are specially adapted to the manufacture of Bessemer steel. The richest mines are in three well-defined districts, comprised in the Marquette, Menominee, and Gogebic ranges.

In the Lower Peninsula salt is a valuable product. The salt fields lie chiefly in the Saginaw Bay, Manistee, and Ludington basins. Deposits of coal are found in Saginaw, Bay, Eaton, and Jackson counties, the area of the coal-beds being 6,700 square miles. The coal produced is, however, of inferior quality. Marl, used in the making of Portland cement, is an important product. Beds of gypsum are found near Grand Rapids and elsewhere. Among other mineral products are various kinds of limestone; also grindstones of fine quality, asbestos, graphite, and petroleum. Mineral springs of considerable value also exist in the Lower Peninsula.

Manufactures. Michigan is one of the greater manufacturing States of the Union. Notwithstanding the depletion of forest areas, the State has retained its lead in the manufacture of furniture. The necessary lumber, however, is to a large extent shipped from other States and from Canada. Grand Rapids is one of the great furniture-manufacturing cities of the world. Foundry and machine-shop products also are of great and increasing importance. Planing-mills and carriage factories, railway car-building works, and tanneries add largely to the wealth of the State. Detroit has built up an extensive trade in the manufacture of chemicals and druggists' supplies and it possesses the best-equipped and largest chemical laboratory in the world. Among the States Michigan takes third place as a producer of Portland cement, and the output is constantly increasing. Shipbuilding is engaged in with marked success at Bay City, Detroit, and Grand Haven; from the shipyards at these ports are launched the best-constructed vessels intended for the traffic of the Great Lakes. Among the minor manufactures of the State are agricultural implements, barrels, wood-pulp, and iron and steel products.

SHORES OF ISLE ROYAL, LAKE SUPERIOR

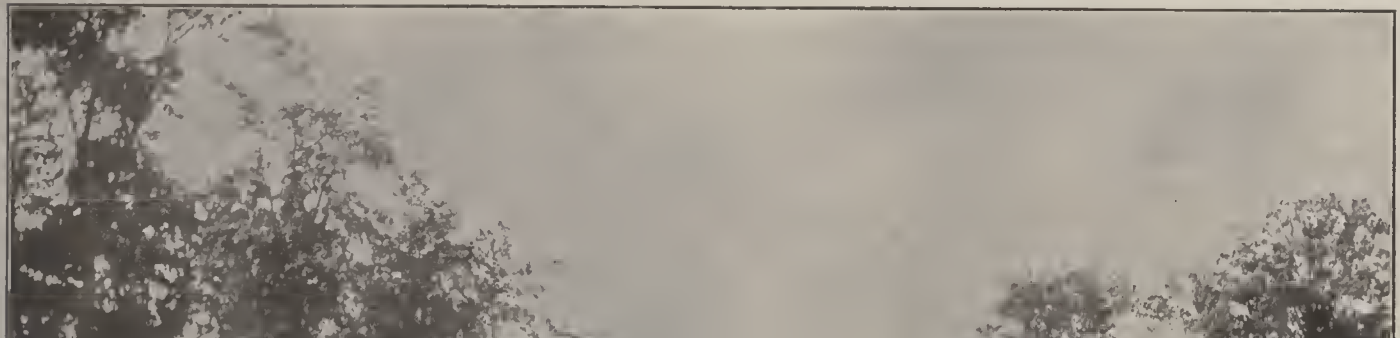
Far out from Keweenaw Point, and on the whole closer to the shores of Canada than to those of the United States, lies Isle Royal, the most northern part of Michigan. It is a rocky and forest-covered outpost of the northern frontier, rich in its copper deposits and salmon trout fisheries, yet so far removed from the usual routes of travel as to be without a permanent population. Its many harbors are almost untouched by commerce and only the temporary homes of sportsmen and miners rise amid the wilderness of spruce and firs.

Chief Cities. Detroit, the metropolis of the State, is situated on the Detroit River below Lake St. Clair. The river here affords one of the best harbors on the Great Lakes. Detroit is an important railway center and possesses a large and constantly increasing lake and land commerce and an extensive American and Canadian trade. Grand Rapids, second city in size, a port of entry, is situated on both sides of the Grand River at the head of steamboat navigation, has abundant water-power, and is one of the chief railway centers of the State. It is celebrated for the production of lumber, furniture, wagons, and woodenware. Near it are found the richest gypsum beds in the State. Saginaw lies on both sides of the Saginaw River and nearly in the center of the Saginaw Valley. Its manufactures are chiefly lumber, foundry and machine-shop products, flour, and salt. It is a prominent railway center and market-town.

Near the mouth of the Saginaw River, on opposite banks of the stream, are Bay City and West Bay City. Their prosperity is based chiefly upon lake fisheries, together with the manufacture and shipment of lumber. Muskegon, possessing a splendid harbor on Lake Michigan, is also an important lumber port. Jackson is one of the more important manufacturing cities of the interior. Kalamazoo, in a famous celery-growing district, has many mills and factories.

Historical. By virtue of discovery and early exploration France claimed all the territory in the St. Lawrence River basin. In 1763 the sovereignty of Canada and New France was transferred to Great Britain, to the great dissatisfaction of both the French colonists and the Indians. During the same year, Pontiac, a leading Indian chief, planned a movement of all the Western tribes for the destruction of the English garrisons, but the conspiracy only resulted in ultimate failure, and in 1764 hostilities terminated. By the treaty of Paris in 1783, Michigan became a part of the territory of the United States, but the British did not immediately withdraw. On July 11, 1796, Michigan came entirely under the protection of the United States as a part of the Northwest Territory.

The region was made a part of the Territory of Ohio in 1800, and of Indiana in 1802. On June 30, 1805, Michigan was organized as a Territory, embracing part of the former Territory of Indiana. In 1812 the region was taken by the British, but abandoned a year later. The arrival of the first steamboat in 1818 and the opening of the Erie Canal in 1825 gave a new and vigorous impulse to local settlement. Immigration increased steadily, and in 1835 a State constitution was adopted in convention at Detroit, but it was not accepted by Congress until in 1837, when Michigan was admitted into the Union as the twenty-sixth State.



VIEW IN BELLE ISLE PARK, DETROIT

Belle Isle, the famous island park of Detroit, is located in the Detroit River, some distance above the business part of the city and just below the broad expanse of Lake St. Clair. A great bridge connects the island with the mainland. Nature made the place an attractive spot and the skill of the landscape artist has rendered it still more beautiful. It is 700 acres in extent, a scene of intermingled lawn and woodland, crossed by well-kept paths and intersected by a winding channel where boating is safe and delightful.

WISCONSIN

WISCONSIN, one of the Northern Central States, has an area of 56,040 square miles, including 1,590 miles of water surface. The State has a shore line of about 125 miles on Lake Superior and one of about 200 miles on Lake Michigan. The proportion of foreign-born inhabitants in the State is about one-fourth of the whole number.

Physiography. In the southern two-thirds of the State the surface in general is level or gently undulating, while in the northern portion it is broken by rugged hills and comparatively high elevations. Within the State is to be found the low ridge that forms the divide between the basins of the Mississippi River, Lake Michigan, and Lake Superior. The divide, with an elevation of 1,100 to 1,700 feet, culminating in the Penokee Range in Ashland County, extends from the sources of the St. Croix River eastward nearly to the State line in the Gogebic iron-mining region. Thence it passes irregularly southward and a little eastward to the Illinois State line. Throughout its southern part this ridge is so low as to be almost imperceptible, yet it is an important watershed. The highest point in the State is Summit Lake in Langlade County, 1,729 feet above sea-level.

The Mississippi River in its course along the western border receives as its chief tributaries the St. Croix, Chippewa, Black, and Wisconsin rivers. The last-mentioned stream, the largest in the State, is 600 miles in length and is navigable to Portage, where a canal prolongs navigation to the waters of the (northern) Fox River. The Rock River unites with the Mississippi in Illinois, and the (southern) Fox River flows southward into the Illinois River.

Many beautiful lakes are widely distributed throughout the eastern and northern divisions of the State, the largest of these being Lake Winnebago, about thirty miles long, lying between Winnebago and Calumet counties. Lakes Pepin and St. Croix are not well-defined lakes but simply unusual expansions of the Mississippi and St. Croix rivers. The "Four Lakes" near Madison, of which the largest is Lake Mendota, are noteworthy for their beauty.

THE FORMER CAPITOL AT MADISON

Madison was urged as a place for the permanent capital of Wisconsin by a town-site syndicate during territorial days, arguments for its selection being based upon the central location and beauty of the site. A new town, named after President Madison, was platted and in 1839 it became the seat of government. The Capitol after long years of service as official headquarters was destroyed by fire early in 1904 and the offices of the State government are at present without a permanent home.

Climate, Flora, and Fauna. Situated in the heart of the continent and without great diversity of altitude, Wisconsin has the average climate of the temperate zone, which, although frequently severe, is salubrious. The winters are long and often intensely cold, yet the air generally is dry and stimulating, and sufficient snow falls to protect vegetation. The summer is brief but usually quite warm, with clear skies except during the short and frequent rains; and the autumn is mild and exceedingly pleasant. The mean temperature for the whole State is about 65° for summer and 20° for winter. The annual rainfall is very evenly distributed over the State.

The northern half of Wisconsin has extensive forests of white pine, hemlock, and spruce, while in the south and west the oak, poplar, hickory, and other well-known trees are abundant. In the less settled regions may be found wild game, including the deer, bear, wolf, and smaller animals, with ducks, partridges, grouse, and other wild birds and water-fowl in great variety. The elk and wild turkey have become rare. The streams and lakes abound in excellent food-fishes, while those taken from Lakes Superior and Michigan are among the best that are furnished to the inland markets.

Farms and Forests. Agriculture in its various branches is the leading industry. The southern section, which is more thickly settled and has a more genial climate, contains the best farms. There is within the sandstone region in the

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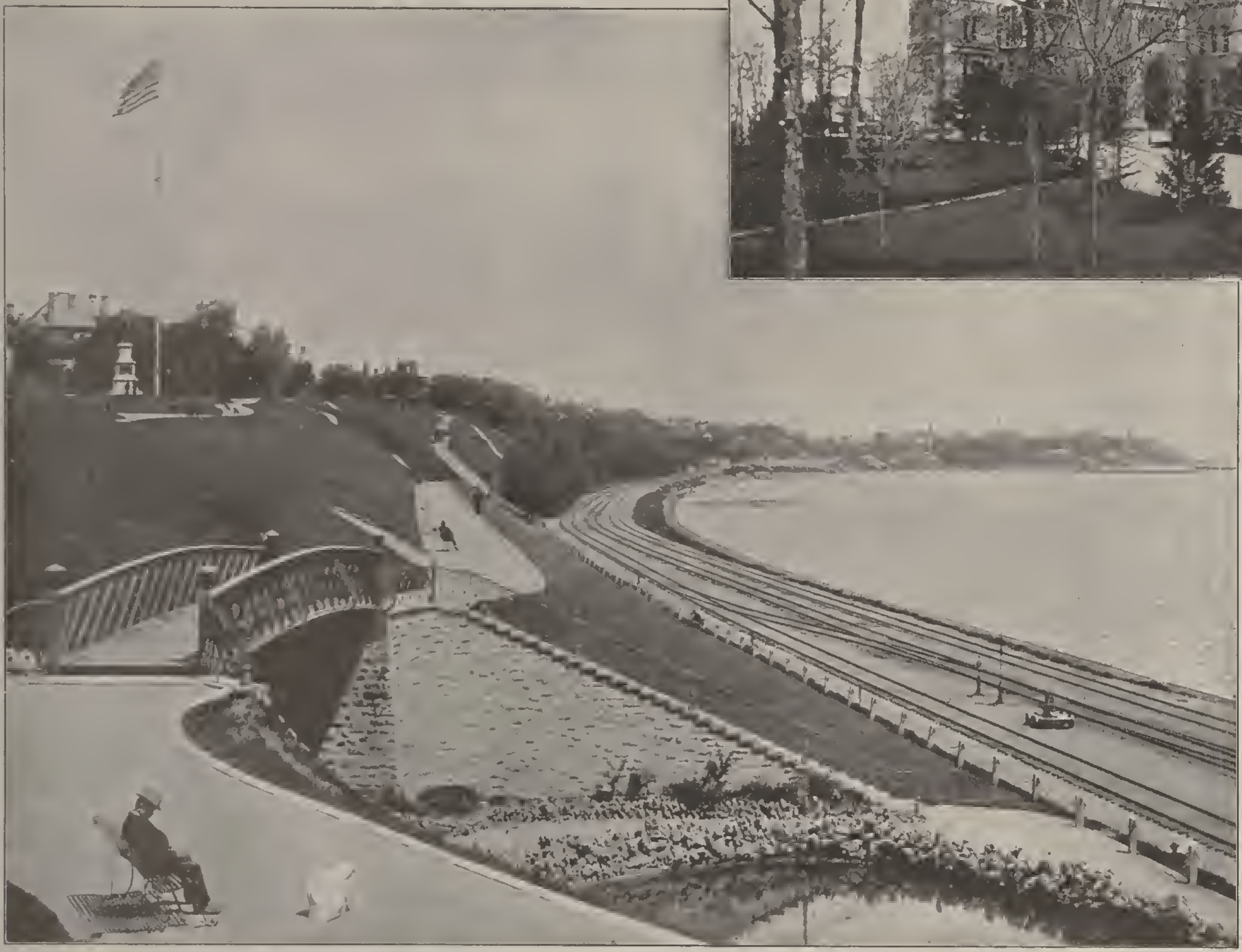
FALLS OF THE FOX RIVER AT KAUKAUNA

From Lake Winnebago to Green Bay the valley of the Fox River embraces wooded and rolling country with beautiful rural scenery. In this portion of the valley is splendid water-power that makes the Fox River country one of the leading industrial centers of the Middle West. Within a space of 38 miles the stream, broken by rapids and by waterfalls like that at Kaukauna, has a descent of about 170 feet.

southern central part of the State a sandy soil of low quality marked generally by a growth of small oak timber, but interspersed with fertile alluvial areas. The chief attention is given to grain, live stock, and dairy products, but excellent crops of flax, tobacco, and hops are grown, and large quantities of fruit are raised. The principal farm crops are corn, oats, hay, wheat, potatoes, barley, and rye. Wisconsin ranks second among the States in the production of rye and third in yield of oats, Monroe County leading in importance. In the southern counties apples, grapes, and berries are raised in large quantities.

SOLDIERS HOME, MILWAUKEE

Three miles from the main part of the city of Milwaukee is the National Home erected as a refuge for aged and disabled veterans of the Republic. A splendid estate of 425 acres lies around it, a large part of which is laid out as a park.



NORTHWARD VIEW IN JUNEAU PARK, MILWAUKEE

The bluff along the lake shore at Milwaukee forms, north of the Milwaukee River, one of the most attractive of parks, named in honor of Solomon Juneau, the founder of the city. A narrow terrace at the water's edge is still used by railroads entering the city. Above this are green slopes, surmounted by a splendid statue of Juneau and one of Leif Ericsson, the Norse discoverer of America. Toward the north lies the great curve of the bay, terminating in the government breakwater.

Next in value to the soil among the natural resources of Wisconsin stand the forests. The northern part of the State embraces a segment of the great forest belt of the United States. Its pine is of the best quality, and the numerous streams and railway lines provide ready transportation for the logs from the forests to the mills.

Mines and Fisheries. The greater part of the Wisconsin output of iron ore, the chief mineral product of the State, is taken from the Menominee and Gogebic ranges in the extreme north, which extend into the Northern Peninsula of Michigan. The mountains known as the Penokee Range furnish an ore adapted to the making of Bessemer steel. Magnetic iron ore is mined in the Menominee region. Among other minerals found in the State are lead and zinc, which are mined in the southwestern part.

There are many valuable sandstone and granite quarries, and limestone abounds in various parts of the State. About one-half of the limestone produced is manufactured into lime. Mineral springs are numerous, Wisconsin ranking first among the States as a producer of mineral waters. Valuable clay deposits also exist. No coal is found in the State.

Fisheries constitute an important industry in the Great Lakes, along the Mississippi River, and in the interior waters of the State. Whitefish and lake trout are taken in large quantities from the waters of Lakes Superior and Michigan, while the rivers and interior lakes abound with brook trout, pickerel, perch, and bass. Considerable sums of money are spent by the State Fisheries Commission in the protection and propagation of the most desirable species.

Manufactures. As a manufacturing State, Wisconsin has had a remarkable development, based upon its abundant supply of raw materials, its large though as yet only partially developed water-power, and its excellent facilities for the marketing of products. The chief industrial enterprise of Wisconsin is the manufacture of lumber and timber products. The output of flouring and grist mills ranks second in value among the finished products of the State. Although the agricultural interests of Wisconsin are large, much of the grain consumed by the mills of the State comes

CLIFF AND STONE FACE, DALLES OF THE ST. CROIX

The picturesque beauty of the Dalles of the St. Croix River is equally notable on either the Wisconsin or the Minnesota side, both of which are included in the Inter-state Park at Taylors Falls. One of the most interesting of the scenic features of the park is the human profile in stone, on the Wisconsin side. It stands high above the stream, on the edge of a jutting cliff. Close at hand the harsh and rugged features of the face are startlingly distinct.

STATE HISTORICAL AND UNIVERSITY LIBRARY

The library of the State Historical Society of Wisconsin, which, with that of the State University, has a splendid home in a building on the Univeristy campus at Madison, is one of the celebrated libraries of America. No more complete collection of sources on the history of the Western States exists than that gathered by the scholars under whose care this collection has grown to its present magnitude.

from without its borders. In the factory manufacture of dairy products Wisconsin held second place among the States in 1900. Wisconsin butter not only finds its way into all markets of the United States, but is exported to the West Indies and to England. The manufacture of foundry and machine-shop products, centered chiefly at Milwaukee, has developed in recent years more rapidly than any other industry of Wisconsin. The making of malt liquors has had a development more than commensurate with the increase throughout the country, Milwaukee continuing to be the principal seat of the manufacture. Among other leading industries of this State are slaughtering and meat-packing, the manufacture of paper and wood-pulp, iron and steel, furniture, planing-mill products, carriages and wagons, cars, leather, boots and shoes, men's clothing, hosiery, and knit goods. Shipbuilding also is carried on to some extent.

THE DALLES OF THE WISCONSIN RIVER

In the vicinity of Kilbourn are the Dalles of the Wisconsin River, a gorge nearly eight miles in length, in which the stream, narrowed in places to a width of barely fifty feet, dashes with great force along its tortuous, rock-girt passage. On either side the encroaching sandstone rocks have been worn into grotesque or imposing forms, or into precipitous overhanging walls. In the time of low water the gorge may be explored with a boat, but at high water the stream becomes a raging torrent.

Chief Cities. Milwaukee, the commercial metropolis of Wisconsin, and likewise the largest city in the State, has one of the finest harbors on the Great Lakes. It is a port of entry and one of the most important commercial centers of the Northwest. As a grain market it stands among the foremost cities of the world, and it is also famous for its extensive breweries. The chief manufactures of Milwaukee are iron and steel, foundry and machine-shop products, agricultural implements, leather goods, malt liquors, flour, meat products, and ready-made clothing.

Superior is situated on Lake Superior at the mouth of the St. Louis River, which forms a safe and commodious harbor. The city is a great distributing point for coal and oil, and its shipments of lumber, iron ore, and grain are enormous. The city has the largest dry-docks of any lake port, and an extensive shipyard where the peculiar whaleback steamers that have become a valuable feature in the lake carrying trade are built. Racine is a port of entry and has a large trade in lumber and coal. Its leading manufactures are agricultural implements, wagons, carriages, machinery, boots and shoes. Sheboygan is a lake port, and has important manufactures, that of furniture being in the lead.

La Crosse is pleasantly situated on the Mississippi River at its confluence with the La Crosse River. The leading manufactures of the city are lumber, shingles, sash, doors, blinds, flour, and malt liquors. Oshkosh, on Lake Winnebago at the outlet of the Fox River, is the center of the lumber trade for the region of the Fox and Wolf rivers, and the establishments engaged in the manufacture of lumber and timber products and in allied industries are among the chief business enterprises of the city.

Madison, the capital of the State and one of its most beautiful cities, is finely laid out, having the State Capitol for its center. The buildings of the University of Wisconsin are here. In the vicinity are attractive summer resorts.

Historical. The first white man to stand upon the soil of Wisconsin was Jean Nicolet, who came in 1634 as an agent of Champlain, and who partially explored the Fox River from Green Bay. In 1665 Father Claude Allouez established a mission at La Pointe, at that time located on Chequamegon Bay, but later removed to Madeline Island. In 1673 Joliet, leaving Quebec under orders to discover the South Sea and taking with him Father Marquette from Mackinac, ascended the Fox River, crossed the short portage to the Wisconsin River, and descended the latter stream to the Mississippi. Before 1700 a French military post was established at Prairie du Chien, and about 1750 a trading-post was established at Green Bay, which developed into a permanent colony. Some forts were erected by fur traders at various places, but the region was practically unsettled in 1763 when it passed into British control. After the American Revolution the British delayed withdrawal from Wisconsin. The authority of the United States was not established fully until after the close of the War of 1812. The area now forming Wisconsin was included in the Northwest Territory by the Ordinance of 1787. The Territory of Wisconsin was organized in 1836, and in 1848 Wisconsin was admitted into the Union.

MILLING PLANTS AT THE CITY OF SUPERIOR

MINNESOTA

MINNESOTA is one of the Northern Mississippi Valley States. Its total area is 83,365 square miles, of which 4,160 square miles are water surface. A little more than one-fourth of the people are of foreign birth, the greater portion of these being natives of the two northern countries of Europe, Sweden and Norway, while Germans are next in number.

Surface Features. The surface of Minnesota, with the exception of a few limited areas, is an undulating plain with an average elevation of over 1,200 feet above sea-level, diversified by a succession of small rolling prairies studded with lakes and groves, alternating with belts of timber. The State lies nearly in the center of the continent, and embraces the watershed of the great drainage systems of the Mississippi River, the Red River of the North, and Lake Superior. The northeastern corner of the State consists in part of rugged highlands that reach an altitude of about 2,000 feet above sea-level and are drained by the rapidly flowing streams that empty into Lake Superior and Rainy Lake. The greatest elevations in the State are Mesabi Range, 2,460 feet; Misquah Hills, 2,400 feet; and Giants Range, 2,200 feet in height above sea-level.

From the high ridges in the northeastern counties a series of uplands stretch across the State toward the southwest. It is a part of the extended watershed known as the Height of Land, which reaches from Labrador westward to Northern Quebec and Ontario, and reenters Canada after traversing Minnesota and North Dakota. In Minnesota this elevation separates the basin of the Red River from that of the Mississippi River. The hills which form the ridge in Minnesota are deposits of drift material left by ancient glaciers, and hence have no ruggedness of form, while the extremely gradual slope of the surrounding country also tends to take away from them all impressiveness. A lesser elevation, serving as a watershed between the Great Lakes and the Mississippi basins, leaves the Height of Land and extends into Wisconsin.

In the northwestern part of the State is the fertile Red River Valley, which is the former basin of a great lake. From this section a great depression crosses the State to the Mississippi basin, almost permitting a mingling of waters, so slight is the elevation of the watershed at this point. In the southeastern part of the State is a rugged section which has not been influenced in its contours by glacial action. Here are gorges and canyons, edged by rocky bluffs, the region affording much picturesque scenery.

THE CAPITOL AT ST. PAUL

In 1849 the Territory of Minnesota came into existence, and St. Paul, then the principal settlement and chief commercial point, became naturally the capital city. Several buildings have succeeded one another as homes of the Territorial and State governments. On the upper slope of a hill, which rises gently from the river bluff, there now stands a newly built capitol, overlooking the city. This building, first occupied by the government in 1905, ranks as one of the most magnificent State houses in the Republic.

Hydrography. The streams of Minnesota include several rivers of commanding importance. First among these is the Mississippi, which rises on the dividing ridge between the Red River of the North and the streams that flow southward. This river flows first to the northeast, then southeast, then to the south, widening steadily in its course, and receiving on either side many small streams. Throughout its upper waters it has many rapids and waterfalls. With its tributaries the Mississippi drains all the southern and central portions of the State and a large section of the northern portion. Of the course of this great river, 797 miles belong to Minnesota, the State of its source, and large steamers ascend the river to St. Paul, 2,200 miles from its mouth.

The Red River rises in Elbow Lake, in Grant County, not far from the western border of the State. Part of its course marks the boundary of the State for 379 miles. It then crosses into Manitoba and empties into Lake Winnipeg. It is navigable for small steamers for about 250 miles within the United States. The Minnesota River rises in a series of lakes on the Dakota border, and flows across the State to unite with

A LUMBER RAFT PASSING THE BRIDGE AT WINONA

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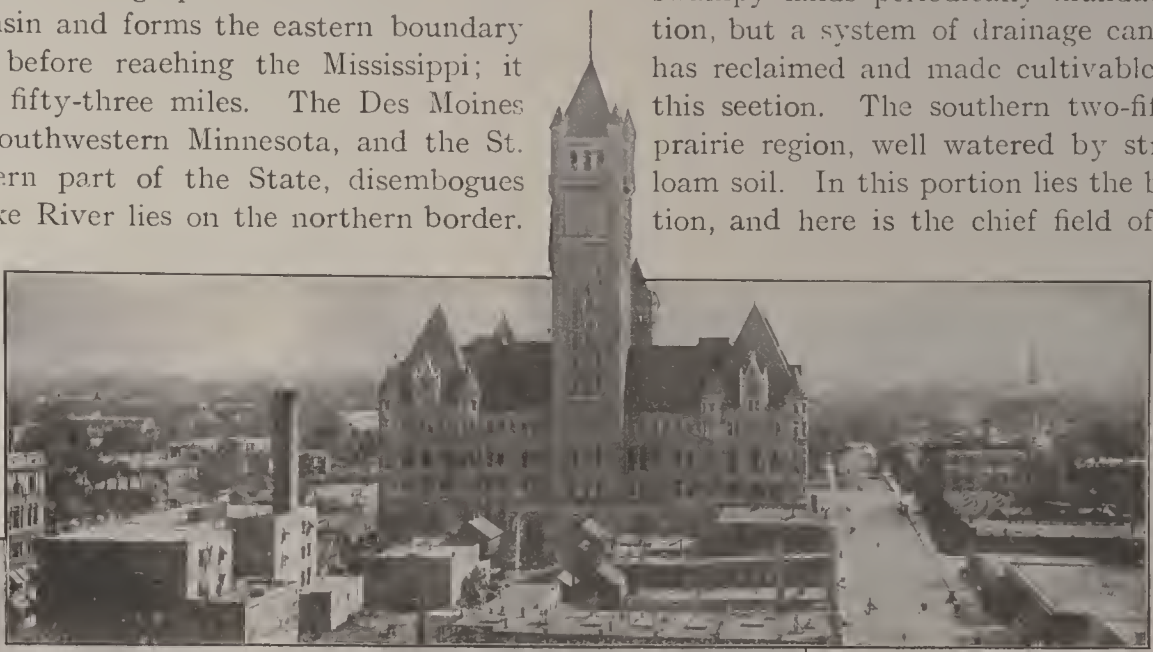
For the passage of the great river-commerce which moves daily upon the Mississippi, the bridges, from St. Paul to the Gulf, are ever swinging. In Minnesota, below the mouth of the St. Croix, a common sight is the passage of some immense lumber raft on its way to the great sawmills of Iowa. Guided by steamboats, these rafts seldom fail to make their long trips safely, but now and then one is swept sidewise by some treacherous river-current and goes to ignominious wreck upon the piers of some stately bridge.

the Mississippi, being navigable for a large part of its course. The St. Croix River rises in Wisconsin and forms the eastern boundary of Minnesota for 129 miles before reaching the Mississippi; it affords a passage for boats for fifty-three miles. The Des Moines River flows for 135 miles in Southwestern Minnesota, and the St. Louis River, in the northeastern part of the State, disembogues into Lake Superior. Rainy Lake River lies on the northern border.

Minnesota is famous for its multitude of beautiful lakes. According to a rough estimate they number about 7,000 and are located mostly in the northern and central divisions of the State. The scenic beauty of these lakes is such that they have become famous as places of resort for pleasure-seekers. The largest lakes lying wholly or in part within the State are the Lake of the Woods, with an area of 612 square miles, Red Lake, Mille Lacs, Leech Lake, and Rainy Lake.



THE COURT-HOUSE AT MINNEAPOLIS

YACHTING ON WHITE BEAR LAKE, NEAR ST. PAUL

White Bear Lake, situated a few miles from St. Paul, is famous for its annual yacht races, held under the auspices of a yachting club that takes its name from the lake. Its waters are admirably adapted for aquatic sport, having an area of some 2,200 acres and being free from rocks and shoals. During the boating season scores of cottages, camps, and summer hotels occupying sites on its shores are the homes of people of the Twin Cities who flock here to escape the discomforts of town.

Climate, Flora, and Fauna. The winters of Minnesota often are extremely cold, but the air is pure and dry. Snow falls early in December and remains on the ground until the last week of March. The summers are warm and during that season rains are most frequent. Throughout the year the dryness and purity of the atmosphere do much to relieve the climate of the unpleasantness usually connected with extreme variations in temperature. The mean annual temperature for that part of the State which lies below the forty-seventh parallel of latitude is 40°.

The timbered area of the State is very large, covering more than half its extent. Forests of pine extend far to the north, and birch, maple, ash, aspen, and elm also abound. A vast forest of hard woods, known as the "Big Woods," overspreads the central section of the State west of the Mississippi. On the river bottoms are found linden, basswood, elm, aspen, and other common trees; in the swamps are tamarack and cedar. In the lake region grows a species of wild rice which is used as food by the local Indian tribes.

The State, especially in the northern section, is a paradise for huntsmen. Among the larger wild game of the forests are the deer, antelope, and bear. The wolverine, otter, wolf, and the smaller wild animals inhabit all the more remote districts. Game and other birds are numerous through the State. Pelican, tern, loon, wild geese, ducks, and other water birds in great numbers haunt the lakes. The waters of the rivers abound in trout, pickerel, bass, and other fish.

Agricultural Resources. Two-thirds of the area of Minnesota is adapted to agricultural purposes. An extensive portion of the Red River Valley consisted originally of wet, swampy lands periodically inundated and impossible of cultivation, but a system of drainage canals built under State direction has reclaimed and made cultivable thousands of acres of land in this section. The southern two-fifths of the State form a great prairie region, well watered by streams, and having a rich clay loam soil. In this portion lies the bulk of the agricultural population, and here is the chief field of the dairying and fruit-raising branches of farm work. The northeastern two-fifths of the State are timbered. Although embracing many districts with clay or peaty soil suitable for various crops, this portion is, on the whole, much less desirable for agricultural settlement than the more southern parts.

The largest percentage of acreage in Minnesota is devoted to the cultivation of wheat. Minnesota ranks third among the States in the value of its wheat crop. Fruit culture has received increased attention in recent years. Apples, plums, grapes, and small fruits are especially adapted to the soil and the cool climate. Other farm products are flaxseed, oats, hay, corn, barley, potatoes, and rye. Production of wool is steadily increasing.

Forest Resources. The industrial activities of the State are increased to a great degree by the presence of extensive forests in the central and northern parts. Unusually favorable conditions have aided the commercial development of these regions. The small streams which penetrate the wooded areas usually are of sufficient volume to carry logs from the lumber camps to the sawmills. At the same time these streams furnish a continuous waterway from the mills to the important markets of the whole Middle West, since their waters flow more or less directly into the Mississippi River. The enormous quantities of material taken from the Minnesota forests have depleted certain districts, but so vast is the wooded area that it still constitutes one of the greatest of the State's resources. By means of small railroads, built into districts that are remote from streams, lumbermen are now reaching timber that was hitherto

SCENE IN A LUMBER CAMP OF NORTHERN MINNESOTA

The existence of a vast forest belt covering the upper part of the State of Minnesota, turning the energies of the people to the exploitation of timber wealth, places the scenes of the lumber camps among those that are typical of the industrial side of Minnesota life. At these camps may be seen immense quantities of piled logs, from which the bark has been stripped, awaiting the day that they will be dragged to the nearest stream, corded into rafts, and entrusted to the waters for transportation to the great lumber mills.

inaccessible for profitable work. The State government has adopted, within recent years, the policy of guarding the forest resources for the sake of coming generations. Efforts are being made under its authority, for such oversight as will prevent the ravages of fire and the spoliation of the woods by wasteful methods of lumbering.

Mines and Manufactures. Minnesota ranks second among the States as a producer of iron ores. Red hematite ore is the sole variety found; it is mined in the Vermilion and Mesabi ranges. The copper area of Michigan extends into Minnesota near Lake Superior, but the field has been very little worked. In 1894 gold was discovered and worked in the vicinity of Rainy Lake and the Lake of the Woods. However, the yield was small and has been steadily decreasing. Building stones of various kinds and of excellent quality abound.

The two great manufacturing industries of the State are those of flour and of lumber milling. At the last census the combined output of these industries amounted to one-half of the total value of the manufactures for the State. In the manufacture of flour Minnesota is the leading State of the Union. The output of its flouring-mills is nearly twice that reported by New York, the nearest competitor. The white pine forests, although greatly reduced, constitute one of the chief sources of wealth in the State. The lumber mills are chiefly in the southeastern part of the State. In recent years there has been an enormous advance in the factory manufacture of butter, cheese, and condensed milk. The wholesale meat-packing industry is fast increasing the value of its products. The product of foundries and machine shops is also large. Notwithstanding the enormous output of its iron mines Minnesota does not rank among the leading States in the manufacture of iron and steel products, which is due largely to a lack of coal.

THE DEVIL'S CHAIR, INTERSTATE PARK

Among the castellated rock formations that lend beauty to the gorge of the St. Croix River at Taylors Falls, in the Interstate Park, one of the most noticeable is the Devil's Chair. It is a huge columnar mass, towering at a height of eighty feet above the stream, and standing out boldly against the sky, with the receding wooded cliff serving as a foil for its gigantic form.

Chief Cities. Minneapolis and St. Paul, the two largest towns of the State and known as the "Twin Cities," are contiguous and connected by steam and electric railway lines. They effect the trade exchanges for a great surrounding territory, and the combined output of their manufactories represents more than one-half of the value of all the manufactures of the State. Minneapolis is built on a natural esplanade overlooking the Mississippi River. The industrial prosperity of the city is due in great measure to the water-power furnished by the Falls of St. Anthony. Large flouring establishments make Minneapolis one of the greatest flour-producing cities in the world. St. Paul, the State capital, is situated on both banks of the Mississippi River at the head of navigation for large steamers. The city has many manufactories and controls a large wholesale trade. It is notable also for its splendid park system.

Duluth, at the extreme western point of the Great Lakes, has had a sudden rise resulting from a fortunate geographical position with regard to the great wheat-fields and iron mines of the Northwest. The harbor is protected by a narrow point of land extending into the lake for seven miles, forming a natural breakwater through which a ship canal has been constructed. Duluth has extensive iron and steel works, with lumber and flouring-mills, and its share in the commerce of the Great Lakes is important.

Winona has become an important point for river shipment of lumber and grain. Stillwater, on the St. Croix River, is the site of the State Prison and has several large lumber mills. Mankato, on the Minnesota River, has manufactories for flour, lumber, and other commodities. Two Harbors, situated on the shore of Lake Superior, is notable for its shipments of iron ore and lumber and for its receipts of coal. St. Cloud is a manufacturing and educational center, located on the Mississippi River. Faribault possesses several important State institutions. Red Wing is a grain-shipping point.

Historical. Probably the first white men to behold what is now the State of Minnesota were Radisson and Groseilliers, who in 1652 began a traffic in furs with the Sioux tribes in that locality. Hennepin, who in 1680 visited certain Indian villages in the vicinity of Mille Lacs, discovered and named the Falls of St. Anthony. The first really extensive exploration of Minnesota was made between 1817 and 1824 by a government expedition. About the same time the Red River country was visited by the Earl of Selkirk, who induced Scotch emigrants, and later a colony of Swiss, to settle at Winnipeg, but the severity of the climate impelled them to migrate southward to the vicinity of St. Paul. In 1821 Colonel Snelling erected at the junction of the Mississippi and Minnesota rivers a stronghold which he called Fort St. Anthony, now Fort Snelling. St. Paul was founded as a Jesuit mission in 1841. In 1849 Congress organized the Territory of Minnesota and immigration began to pour into the fertile southern valleys. The present boundaries were defined by Congress in February, 1857. A State constitution was adopted in October of the same year and Minnesota was admitted into the Union May 11, 1858. In 1862 occurred the terrible Sioux massacre, at New Ulm, the last outbreak of savage ferocity on Minnesota soil.

BIRD'S-EYE VIEW OF THE MAHONING IRON MINE IN THE MESABI DISTRICT

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In the famous Mesabi iron district of Minnesota the methods followed in the work of mining are very different from those used in iron-producing regions of other parts of the world. Instead of reaching the ore deposits by means of a shaft and radiating galleries the covering of soil is stripped bodily off the underlying iron mass, allowing full play to every excavating device that can be utilized. Powerful steam shovels are used to break up the ore beds and the product is then carried away for shipment by means of railways, with tracks extending directly into the mines.

IOWA

IOWA is one of the Central Western States of the Union and has an area of 56,025 square miles, of which 550 square miles are water surface. The State shows a general tendency to an increase in the proportion of city population. Nevertheless, the proportion of the people living outside of cities is large, being nearly four-fifths. The element of foreign birth is about one-eighth.

THE CAPITOL AT DES MOINES

Like the capital cities of many other States, Des Moines owes its possession of the State government to its central position in the commonwealth. It was a well-known place, however, when selected, having been the site of a military post where Federal troops had stood guard over the security of the frontier. The removal of the seat of government to this point occurred late in 1857. The present Capitol was first occupied in 1884, while yet incomplete, its erection extending over a number of years.

Surface Features. The State lies wholly within the prairie region of the Mississippi Valley. Its surface, now level, now undulating, in general presents but little relief. The Ocheyedan Mound, in Osceola County, about 1,650 feet above sea-level, is believed to be the highest point in the State. There are no mountains, nor even high hills, but along the rivers there are many limestone bluffs, often rising from 200 to 400 feet above the surrounding level. These form the breastwork of the prairie tableland whose general level ranges from 600 to 1,000 feet above that of the sea. The southern and western parts of the State are prairie land intersected by streams; in the northeast the surface is higher, having many hills covered with trees, and craggy rocks lining the rivers. Between the two great drainage systems of the State, that flowing into the Mississippi and that finding its way to the Missouri, there is a plainly marked divide, a low ridge crossing the State with sinuous windings from the northwest to the southeast, parting the headwaters of many streams.

Hydrography. The chief tributaries of the Mississippi are the Upper Iowa, the Turkey, the Maquoketa, the Wapsipinicon, the Iowa, the Skunk, and the Des Moines, all of which have southeasterly courses, usually parallel to each other. The Iowa River has its source in Hancock County and unites with the Mississippi about nineteen miles south of Muscatine; its length is about 375 miles, and it is navigable for small boats below Iowa City. The Des Moines River, the largest waterway of the State, rises in Minnesota, flows across Iowa, and after a course of about 500 miles discharges into the Mississippi at the extreme southeastern point of the State. Among the affluents of the Missouri River is the Big Sioux River, which rises in South Dakota, forms about one-third of the boundary between that State and Iowa, and unites with the Missouri two miles above Sioux City. having a length of about 285 miles. In Northern Iowa are a number of small but very beautiful bodies of water belonging in their general characteristics to the chain of lakes that diversify the surface of Minnesota. The largest of these lakes are Okoboji, fifteen miles long, and Spirit, ten miles long, both in Dickinson County Clear Lake, in Cerro Gordo County, is about five miles long and two miles wide.

THE CITY OF DAVENPORT, FROM ROCK ISLAND

Among the important commercial cities that line the eastern edge of Iowa is Davenport. It is among the leading ports that share in the river traffic of the upper Mississippi, being noted as a center for the handling of lumber and as a manufacturing town. The city is situated on the slopes of a high bluff that rises steeply from the Mississippi River. It commands an extensive view of the Illinois side of the stream with which it is connected across the broad current by a magnificent iron bridge raised upon a series of massive stone piers.

Climate, Flora, and Fauna. The climate of Iowa ranges between extremes of temperature, but it is, nevertheless, healthful. Although the winters are somewhat severe and the summers hot, the dryness of the air in a measure moderates both seasons. The mean annual temperature for the State is 47°. Spring and summer usually open from one to two weeks earlier in the southern than in the northern portion of the State. Iowa is subject to occasional visitations from violent windstorms. The rainfall is unevenly distributed.

The forested area of the State is small, and to remedy in a measure this deficiency arboriculture has been encouraged and is practiced in nearly every section. Among the trees of the

State the buttonwood, maple, birch, white and red oak, basswood, elm, black walnut, and others are common. The luxuriant grasses that once covered the wide prairies have generally disappeared, and are now found only in small drainage basins between hills or creek bottoms. Almost all of the wild animals that formerly had their habitat in Iowa have become extinct, and there remain only those smaller quadrupeds that seem to thrive in spite of advancing civilization and increasing population. All of the birds common to the north temperate zone are found in Iowa during the summer months.

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THE PALISADES OF THE CEDAR RIVER

Although Iowa, generally speaking, is distinctively a prairie State, there are portions where the scenery has much ruggedness. This is especially true in some of the southeastern portions. On the Cedar River, near Bertram, in Linn County, are the Palisades, a series of cliffs following the stream for several miles. They are formed of a single massive stratum of dolomitic limestone, and at their highest points are raised eighty-nine feet above the river.

Agricultural Resources. Agriculture is preëminently the industry of the State, Iowa ranking among the foremost agricultural areas of the Union. With a deep, rich soil, abundant water, and a climate favorable to the growth and maturity of cereals, the agricultural interests of the State enjoy exceptional natural advantages. Iowa ranks second among the commonwealths of the Union in the production of corn, oats, and hay. Corn, the characteristic crop of the State, is grown on more than nine-tenths of the farms. Wheat, barley, rye, and buckwheat also are grown extensively, and in some sections flaxseed is an important crop. The culture of the sugar-beet furnishes an increasing item in the farm output, while the growing of fruits is becoming an important industry. Apples are a leading product in most of the southern counties. The culture of plum and prune trees, of peach and pear trees, is rapidly increasing. Grapes are also cultivated; and small fruits, such as raspberries, strawberries, and currants, are profitably grown for home consumption and for market. A great variety of grasses are grown for hay. Sorghum is cultivated somewhat extensively, and most of it is made into syrup. Potatoes and other vegetables thrive in the fertile soil of Iowa.

Stock-raising is widely engaged in. In the value of farm animals Iowa is among the leading commonwealths of the Union, and it far outranks every other State in value and number of swine. The State is surpassed in number and value of neat cattle by Texas only, and in number and value of dairy cows by New York. Butter and cheese are made extensively in creameries, and there is also a large and increasing demand for milk and cream from the growing industrial cities.

Mines and Fisheries. The mineral resources in certain sections of Iowa are sufficient to make mining profitable. The lead deposits, which caused the first great movement of immigration toward the State, are located in the northeastern section. They extend northwestward from the Mississippi River along the valley of the Turkey River. The ore is generally found in vertical crevices; these expand in places into great caves, the walls of which are coated with sulphuret of lead. Bituminous coal underlies almost the entire southern third of the surface of Iowa. The output of this mineral gives the State seventh rank among the coal-producing States of the Union in value of product. Beds of excellent gypsum are found along the Des Moines River near Fort Dodge, and are worked on a profitable scale. Limestone is quarried for building purposes. In several localities beds of fine clay are found and the clay industries are increasing rapidly.

Commercial fishing is actively pursued in several of the rivers and lakes, but principally in the Mississippi, where the catch includes all the desirable fresh-water fishes. From the shells of the fresh-water mussel found in the Mississippi and other rivers buttons are made.

Manufactures. The manufactures of Iowa are varied, and no single locality enjoys an inordinately large share in their production. The State has thus far escaped in great measure the process of

GENERAL VIEW OF COUNCIL BLUFFS, LOOKING WESTWARD TOWARD THE RIVER

Near Omaha, but on the Iowa side of the Missouri River, a narrow plain, backed by a line of high bluffs, borders the stream. Here the explorers Lewis and Clark held council with the Indians in 1804, while on their famous journey, and from this incident comes the name of Council Bluffs. Here is now a busy city. Several steel bridges connect it with the adjacent city of Omaha, Nebraska, while at its very doors lie the rich counties of Western Iowa, and the great river flows at its feet. Such conditions give it rank as an important trade center.

WINTER SCENE ON THE CAMPUS, IOWA CITY

The State University of Iowa is located at Iowa City, and occupies the spacious grounds used by the State government prior to the removal of the capital to Des Moines. The Old Capitol is now one of the University buildings, and by its historical significance adds much to the interest attached to the campus. A winter scene on the University grounds is fairly typical of the winter climate of the Middle West.

industrial centralization that has manifested itself in many of the States of the Union. Being preëminently an agricultural commonwealth, its principal manufacturing industries are those which depend for their raw material upon the products of the farm. Although the bulk of the live cattle sold by the stock-raisers is exported to packing centers in other States, wholesale slaughtering and meat-packing is actively pursued. This industry stands next in importance to that of farming, and next to it, in point of the value, are the creamery products, including butter, cheese, and condensed milk.

The lumbering industry is fourth in rank, also that of the sawmills and planing-mills. The construction and repair of railway cars also forms a considerable industry, as several railway companies have located their car-shops within the State. The manufacture of pearl buttons from the shells of the native fresh-water mussel is a new industry, and its advance to importance has been rapid. The only other important manufactures include the products of flouring and grist mills and of foundries and machine-shops.

AN IOWA COAL MINE, OSKALOOSA

Mahaska County is in one of the principal coal-producing districts of Iowa, its oldest mines being located around Oskaloosa. Coal beds of varying thickness underlie the whole section and outcrop in places. Where the drill indicates seams of commercial value the coal is reached by slopes or shafts that penetrate the surface soil. From underground passages trucks drawn by beasts or cable haul the coal to the surface.

Chief Cities. Des Moines, the capital and metropolis of the State, is situated on the Des Moines River at its confluence with the Raccoon, and is intersected by both streams. The city is laid out in the form of a quadrilateral and has fine parks. It is an equally important railway and commercial center. Dubuque, in the northeastern part of the State, is built partly upon a terrace and bluffs which rise above the Missouri River. The business section, occupying the lower part of the city, is regularly laid out and compactly built, but in the upper portion the streets rise picturesquely one above another. Dubuque is the commercial center of the lead-producing region extending into Illinois and Wisconsin, and has a large number of mills and factories.

Davenport is located on the bluffs of the Mississippi River; among the manufacturing cities of the State it is third in rank, its chief industries being foundry and machine-shop work, and wholesale slaughtering and meat-packing. Sioux City, on the Missouri River, lies in the midst of a fertile agricultural region comprising portions of three States; wholesale meat-packing is the principal industry. Council Bluffs is a supply point for a large farming region; the city has a number of manufactories and is an important railway center.

RURAL SCENE IN CENTRAL IOWA

Cedar Rapids, on the Cedar River, ranks second among the cities of the State in the annual value of manufactures. It is a leading railway center and has a large trade, and is also the seat of important educational institutions. Burlington, on the Mississippi River, has an important river and railway traffic and considerable manufactures. Clinton, another Mississippi River town, is also the seat of many industries, especially railroad shops and wood-working establishments. Keokuk, on the same river but farther south, possesses water-power of some value, but is chiefly notable for a wholesale and jobbing trade. Muscatine is still another industrial city of the great river.

Ottumwa, on the Des Moines River, is in the vicinity of valuable coal-fields and possesses water-power that is the basis of a number of manufacturing enterprises. Waterloo is the trade center of a rich agricultural, dairying, and stock-raising district, besides having railroad shops. Fort Dodge is a railway center, with industries based upon coal-fields and quarries. Iowa City is the seat of the State University.

Historical. In 1788 Julien Dubuque secured from the Indians a large grant of land bordering on the west shore of the Mississippi, south of the Little Maquoketa River, and made a settlement thereon, which was the first white settlement in Iowa. On the site of the present city of Dubuque he erected a fort and engaged in mining and in trading with the Indians until his death in 1810. The region now included in the State of Iowa passed into the hands of the United States as a part of the Louisiana Purchase of 1803. About 1820 a trading-post was established at Council Bluffs. The Sacs and Foxes ceded their lands to the Government in 1833, and before the cession was completed settlers from the Eastern States were ready to cross the Mississippi for settlement. Their cabins were erected upon the sites of Burlington and Davenport, and those places were regularly laid out as villages.

The area now comprising the State became a part of the Territory of Michigan in 1834, and two years later was included in the newly organized Territory of Wisconsin. In 1836 the Territory of Iowa was created, and the first territorial legislature met at Burlington on November 12, 1838. Iowa was admitted into the Union as a State in 1845. In 1852 began a great movement of emigration to the State. The first railway that penetrated into the interior was an extension from Davenport, constructed in 1854. From this time the growth of the State was rapid.

MISSOURI

MISSOURI is situated in the central part of the Mississippi River basin almost midway, on the one hand, between the Atlantic Coast and the Rocky Mountains and, on the other, between British North America and the Gulf of Mexico. It has an area of 69,415 square miles, of which 680 square miles are water surface. The proportion of inhabitants of alien birth in Missouri is but seven per cent, while the colored element forms over five per cent, being much less than in any other of the old slave States. About one-third of the people live in cities.

Surface Features. Missouri is divided principally into three sections—the Upland Plain, in the northern portion; the Ozark Plateau, embracing most of the southwestern third of the State; and the small Southeastern Lowland, bordering on the Mississippi River. The Upland Plain, or prairie region of the State, forms a part of the ancient marine plain that stretches eastward from Colorado across the Mississippi River basin. In this region are extensive glacial deposits. The Ozark Plateau, a region of uplift ranging from 1,200 to 1,700 feet above sea-level, extends with gradual acclivity from the southern part of Illinois into Missouri, and continues thence with decreasing elevation southwestward into Arkansas and the Indian Territory. Numerous separate peaks and knobs diversify its surface. The Southeastern Lowland, lying between the Ozark slope and the Mississippi River, extends from Cape Girardeau on the north to the Arkansas River. This section has many lagoons and swamps, thousands of acres in extent, covered with a dense growth of cypress, gum, and sycamore trees, but there are in it points of land above reach of the highest floods. This tract sank to its present level during the earthquake of 1811–12, which altered the surface of the whole region.

THE CAPITOL AT JEFFERSON CITY

The first State constitution of Missouri provided for a central capital to be located near the confluence of the Missouri and Osage rivers. A State commission surveyed a town-site and in 1826 the State government was transferred from St. Charles to Jefferson City. The present Capitol was first occupied in 1840.

THE FEDERAL BUILDING AT KANSAS CITY

The leading place which Kansas City has taken for many years past as one of the principal commercial and industrial centers of the western country has made it the possessor of many handsome structures used for business purposes. The United States Government has provided for its own needs by the erection of the handsome Federal Building, in which the various offices of the local postal service are housed.

Rivers. The waterways comprise two great rivers and their tributaries, affording abundant facilities for transportation, irrigation, and water-power. The Mississippi River, flowing in a general southeasterly direction, forms the entire eastern boundary. Its enormous tributary, the Missouri, forms the western boundary as far as Kansas City and crosses the central part of the State. Besides the Missouri, the Mississippi has two important affluents whose courses lie partly within the State, the St. Francis and the White. The former is navigable as far as Wittsburg. The course of the White River lies mainly in Arkansas. The principal tributaries of the Missouri are the Grand and Chariton rivers on the north and the Gasconade and Osage rivers on the south, all of them streams that are navigable for small boats during part of the year.

Climate, Flora, and Fauna. The inland location of the State, its altitude, rolling surface, and other physical features secure for it a salubrious climate and one that is well adapted to great agricultural and industrial activity. The mean annual temperature for the State is approximately 54° During the summer thunderstorms are common and occasionally tornadoes have occurred. The annual rainfall for the State is of good volume. Droughts are rare, but the climate is comparatively dry on account of the regular succession of copious rains and clear skies.

Extensive forests still cover a large part of the State; they contain a wide range of hard and soft woods, many of which furnish valuable timber. North of the Missouri River timber land is confined to the river valleys but over one-half of the southern section of the State is wooded. There are in the State species of locust, walnut, maple, gum, hickory, and oak. In the southeastern portion the more common trees are the white oak, gum, poplar, cypress, and ash. The swamp-oak of the southeast ranks next to the live-oak as a shipbuilding timber, and the cypress found in the great swamps along the river-bottoms is continually increasing in value. Immense cottonwood and black walnut trees grow in this section, and numbers of other well-known forest trees, such as pecan, chestnut, cherry, and persimmon, are found also in merchantable quantities.

Missouri presents an attractive field for the sportsman. During the open season it furnishes a considerable portion of the wild game that is shipped to the great markets of the Union. Deer, wild turkeys, partridges, quail, squirrels, and rabbits are to be found in various sections. Red deer range over almost the whole State, and prairie-chickens are still common in the Upland Plain. In the low ranges of the Ozark Mountains game of various kinds is especially plentiful. The streams are abundantly supplied with many kinds of fish.

Agricultural Resources. Missouri enjoys the advantages of an exceptionally fertile and well-watered soil, and of a climate adapted to the growth of a great variety of farm products. Nearly one-half of the population is engaged in agriculture, and two-thirds of the State consists of improved land. Corn is the principal crop and is grown most extensively in the Missouri River basin and in the bottom-lands of the southeast. Missouri holds third place among the States in the production of this cereal. All of the nutritious grasses abound throughout the prairie region. Hay is second among the crops in annual value; in this product, also, the State ranks third among the grass-growing States. Wheat-raising is carried on with great success, especially in the counties along the Missouri River, where the land is rolling and well drained. Potatoes form an important farm product, and in the rich alluvial lands of some of the southeastern counties cotton and hemp are the principal staples. Tobacco is profitably cultivated over large areas. The fruit crop embraces apples, peaches, cherries, plums, grapes, melons, and berries. The area devoted to the cultivation of the grape is large and the manufacture of wine is a growing industry. Abundance of forage and large harvests of grain also make the raising of cattle, mules, sheep, and swine highly profitable.

THE KINGSBURY GATE, ST. LOUIS

In some of the parts of St. Louis that are occupied as residence districts by the wealthier people occur handsome structures of monumental character, and usually of considerable artistic merit, marking the entrances to certain streets. The Kingsbury Gate, indicating the bounds of Kingsbury Place, is near Forest Park.

VIEW IN SHAW'S GARDEN, ST. LOUIS

Shaw's Garden is one of the chief points of interest in St. Louis. It is the creation of Henry Shaw, an Englishman by birth, whose large fortune was made in St. Louis and whose desire was to make this the greatest botanical garden in the world. It already surpasses every similar institution, with the single exception of the celebrated Kew's Garden in England. The Shaw mausoleum, containing the founder's remains, is in the Garden.

Forests and Fisheries. Lumbering forms an important industry in the southern part of the State. The yellow pine of Missouri is excellent for fine interior finishing. The hardwoods found in this section are extensively employed in the making of pianos, carriages, and wagons. The distribution and character of the timber resources are not such as lend themselves to the work of lumbering on a great scale, but there are innumerable small mills in the State whose work in the aggregate is large. Of the output from these mills a considerable portion is absorbed within the State. The redgum wood, which resembles mahogany, is shipped to Europe from points along the Mississippi. White oak is used in large quantities for railroad ties.

The fisheries of Missouri are valuable, owing to the ready market that presents itself for all products in this line. The Mississippi River is the chief fishing ground, but the Missouri and St. Francis rivers also have a large output, as do some of the swamps and lakes. In the order of their importance the chief species are buffalo fish, catfish, frogs, black bass, crappie, and suckers. The mussels of the Mississippi River are taken in large quantities for the sake of the shells, used in the pearl button factories of Missouri and Iowa. St. Louis is one of the leading wholesale fish markets of the United States.

Mines and Manufactures. Missouri is rich in mineral resources. The coal-fields lie along the Grand and Chariton rivers and through a western tier of counties. The most important mines are those of Macon County, which yield about one-fourth of the product for the State. The lead and zinc region underlies Jasper, Newton, Lawrence, and other counties at the southwest, forming a part of the famous Galena-Joplin district extending into Eastern Kansas. For iron deposits the richest region is that which lies in Dent, Washington, Iron, and Wayne counties. Building stone is abundant everywhere. Granite beds are found principally in Iron and St. François counties. Onyx marble from the caves of Southern Missouri is extensively used for ornamental furniture and for interior decoration. Fire and potters' clays are obtainable in many places, and beds of the finest sand, supplying the largest glass-works in the country with material for their operations, exist in the vicinity of St. Louis.

THE EADS BRIDGE ACROSS THE MISSISSIPPI

The great Eads Bridge at St. Louis is one of the few similar structures having world-wide fame. It takes its name from the engineer under whose direction it was built. Three immense spans of ribbed steel comprise the bridge proper, raising the roadway 82 feet above the river, and the great center span is 520 feet in length in the clear. Below the roadway used by vehicles and pedestrians is a railway floor.

In manufactures Missouri ranks seventh among the States and its available resources are far from being fully developed. The foremost industry of the State in point of value is meat-packing; next in importance comes the manufacture of tobacco; third the milling of flour; and fourth the making of malt liquors. Among other industries of growing importance are the manufacture of boots and shoes, the building of railway cars, and the work of foundries and machine-shops.

Chief Cities. St. Louis lies on the Mississippi River, twenty-one miles below the mouth of the Missouri. It ranks fourth among the cities of the United States in population and in manufactures and is the principal commercial, manufacturing, and financial center, not only of the State, but of a large portion of the Mississippi Valley. Two magnificent bridges span the Mississippi here. The city has an area of sixty-two square miles and a river frontage of about twenty miles. St. Louis is handsomely and substantially built, containing many fine public buildings. The city is famous for its excellent public schools. It contributes more than half of the value of all manufactures for the State, and is one of the great interior wholesale markets and distributing points for grain, lumber, and live stock.

Kansas City is the commercial metropolis of a region remarkable for its fertility and mineral wealth. Among the municipalities of the State, Kansas City ranks second in population and in manufactures. The stock-yards of Kansas City rank next to those of Chicago in importance. The city is also a very important grain market. St. Joseph is noted especially as a market for grain and live stock. The value of its manufactures is due chiefly to meat-packing and allied industries.

Joplin, in the center of the lead and zinc district, is noted chiefly for its large smelting, casting, and foundry plants; it is also the principal grain market for Southwestern Missouri, and ranks first among American cities in the manufacture of white lead. Springfield is centrally located in one of the rich agricultural districts of the Ozark Plateau. Its manufacturing interests are large and increasing.

THE ELEPHANT ROCKS, GRANITEVILLE

At Graniteville, near Pilot Knob, where a great belt of granite rock occurs, are the gigantic boulders known as the Elephant Rocks. These owe their existence to the weathering of the exposed outcrop. Water, percolating into the seams and fissures, has disintegrated and washed away parts of the granite, leaving the remainder in rounded masses.

Historical. Missouri was first visited by Joliet and Marquette, in 1673. About 1735, the French during their search for silver, copper, and lead, founded a settlement at Ste. Genevieve, on the west bank of the Mississippi. In 1762 Louisiana was transferred to Spain, but France continued to govern the western section until 1770. In the winter of 1763–64 Laclède established a trading-post near the site of St. Louis.

In 1800 Louisiana again became a French colony and three years later it became a part of the United States by purchase. On March 9, 1804, possession was taken of Upper Louisiana in behalf of the republic by Maj. Amos Stoddard. By act of Congress Upper Louisiana was attached to the Territory of Indiana. In the autumn of 1804 the Government purchased from the Sacs and Foxes about 3,000,000 acres of land immediately north of the Missouri and west of the Mississippi, and in 1808 by a treaty with the Osage Indians nearly all of their territory was ceded to the United States. In December, 1812, the name of the Territory was changed to Missouri. In 1818 Missouri applied for admission into the Union as a slave-holding State. This event precipitated a controversy which agitated the entire nation and which was only temporarily checked by the famous "Missouri Compromise" of 1820. Missouri was admitted by a proclamation of August 10, 1821, as the twenty-fourth State. The "Platte Purchase" of 1836 added to Missouri the lands now included in the six counties at the northwest. During the War of Secession Missouri became a great battle-field and as a border State it suffered severely. The majority of the people of the State were opposed to withdrawal from the Union, and consequently Missouri never lost its place in the federal system, notwithstanding the fact that rival governments were organized by the opposing parties and that one of these went through the formality of passing an ordinance of secession. Since the war the State has had a wonderful development, based upon the exploitation of its own resources, and upon the growth of trade with its neighbors lying to the south and west of it.

TYPICAL SCENERY ALONG SALT RIVER

Salt River flows lazily through the wooded country of Northeastern Missouri, edged by low bottom lands that are in places backed by lines of bluffs. The adjacent land is an alluvial soil of rich loam, whose fertility is increased by the occasional floods that the river pours over it. The earlier forest has been cleared away, and on the great meadows splendid crops of corn, wheat, and oats now are grown successfully.

ARCADIA VALLEY FROM PILOT KNOB

A HAYING SCENE IN MISSOURI

ARKANSAS

ARKANSAS embraces a total area of 53,850 square miles, of which 805 square miles are water surface. The foreign-born population, only one per cent, is unimportant in this State. The colored element constitutes a little more than one-quarter of the whole. Arkansas has no large cities, and the population as a whole is distinctively rural.

Surface Features. Geographically the State is divisible, roughly speaking, into a lowland division in the east and a highland division in the west. The eastern division, comprising a strip from 30 to 100 miles wide bordering on the Mississippi River, is low and flat, almost covered with dense forests and interspersed with lakes and ponds, and is annually overflowed by river floods. From these lowlands there is a gradual undulating ascent in the direction of the Ozark Mountains, which cross the State in the northwest. They attain their greatest altitudes in Mounts Magazine and Fourche, both of which culminate at about 2,800 feet above sea-level. The only other important range in the State is the Boston Mountains, formerly called the Black Hills, a range of highlands extending east from the Ozarks. South of the Arkansas River lies a series of elevations generally trending to the west, and known collectively as the Ouachita Mountains. Both of these ranges reach their highest points at 1,600 to 2,000 feet above sea-level. Beyond the Ozarks lies the extreme eastern edge of an elevated plain which reaches to the Rocky Mountains.

THE CAPITOL AT LITTLE ROCK

When Arkansas became a territory the site of Little Rock, on a great waterway and centrally located, was urged as a place for the permanent capital. A land syndicate platted the new town and offered donations of land for public uses. The legislature approved the site and in 1821 the territorial offices were removed to the spot selected. The newly erected Capitol, probably ready for partial occupancy in 1906, is a splendid building, combining fine proportions with beauty of interior finish.

Streams. The Mississippi River forms most of the eastern boundary of the State and affords a shore-line of 400 miles. The Arkansas River, 2,000 miles long, is one of the greater tributaries of the Mississippi. Rising in Colorado, it crosses the central part of Arkansas in a southeasterly course of about 500 miles, emptying into the Mississippi River at Napoleon. This river, navigable far above the limits of Arkansas into Indian Territory, has a drainage area of 12,300 square miles. The Red River, a navigable stream 1,200 miles long, has its source in the northern counties of Texas. It forms part of the boundary line between Texas and Arkansas, crosses the corner of Arkansas, and passes into Louisiana, where it enters the Mississippi River. The St. Francis River rises at the foot of Iron Mountain in Missouri, flows through the northeastern part of the State, and joins the Mississippi about nine miles above Helena. It is 450 miles long, and navigable during part of the year for 150 miles. The White River, meeting the Mississippi fifteen miles above the mouth of the Arkansas River, is about 900 miles long, and is navigable for small steamers to Batesville, 380 miles from its mouth. The Ouachita River rises in the western part of the State, flows southeasterly into Louisiana, and finally reaches the Red River near its junction with the Mississippi. It is 550 miles in length and is navigable to Camden in Ouachita County, 360 miles from its mouth. The Little Missouri and Saline rivers are its principal tributaries.

MAIN ENTRANCE TO THE UNIVERSITY CAMPUS, FAYETTEVILLE

The State University of Arkansas was opened for instruction in 1872. It is situated in the heart of the Ozark Mountains, 1500 feet above sea-level, on a site noted for its healthfulness and in a section of country widely known for charming and varied mountain scenery. Not the least of the attractions of Fayetteville, where the institution is located, is the broad campus, in itself a place of beauty, above whose delightful shady groves the towers of the University buildings can be seen from afar.

Climate, Flora, and Fauna. The climate of Arkansas is largely influenced by its vast forests, which prevent sudden variations in temperature. The changes in the weather are gradual, and northern blizzards are barred out by mountain ranges. The temperature varies but little from year to year, the average being 60°. Snowfalls occur in the northern counties in winter. Amplitude and evenness of distribution characterize the rainfall.

Of the large forests of Arkansas, the predominant growth is short-leafed pine, but

there are also white oak, cottonwood, cypress, elm, cedar, hickory, black walnut, red gum, and poplar, all of these growing in commercial quantities. Less common are the maple, white ash, wild cherry, white holly, birch, catalpa, sycamore, and persimmon.

The wild animals, which once roamed freely through the Arkansas forests, are now fast becoming exterminated by the work of huntsmen. The panther, bear, and wolf are not often seen. Deer, however, are reported as still fairly plentiful, and the fox yet wanders over the upland regions.

VIEW AT SILOAM SPRINGS, BENTON COUNTY

In the extreme northwestern corner of Arkansas lies Benton County, whose slopes drain partly eastward into the White River, and partly toward the Indian Territory into tributaries of the Arkansas River. There is much beautiful scenery along the little streams of the county, especially at Siloam Springs, located near the State line.

Agricultural Industries. Agriculture is the chief industry of the State. Cotton is first in importance among the agricultural products, and among the cotton States of the Union Arkansas ranks fifth. Nearly one-half of the large farms are cotton plantations. Crops especially excellent in quality are raised in the low river-bottoms. Next in importance to cotton is the corn crop. Among other crops, the more important are hay, wheat, and oats. Tobacco, sorghum, and peanuts also have a large annual yield. The upland regions of Arkansas are the districts in which fruits, as well as cereals, thrive best. The section that is most wholly favorable to the raising of fruits lies in the northwestern counties, wherein are grown nearly one-half of the total number of fruit-trees, exclusive of plums. In the cotton lands the fruit crops consist of peaches and various kinds of berries. The raising of live stock is an important feature of agriculture in the State, and the annual total of animal products is large. The making of butter and cheese, as elsewhere in the United States, is becoming centered in the great creameries. Within recent years there has been a noticeable increase in the wool clip, which indicates an improvement in the grade of sheep raised.

Mineral Wealth. The mineral wealth of Arkansas is large but imperfectly developed. Coal-fields cover several thousand square miles; Sebastian County is the heaviest producing area. Rich zinc mines in the northwestern counties are very productive. Iron and lead deposits are believed to be of commercial value. Antimony is worked in Sevier County, manganese near Batesville, and traces of copper, silver, nickel, graphite, and saltpeter are found. The novaculite or whetstone of Arkansas has a wide reputation and is extensively exported. The rich deposits of bauxite in Pulaski and Saline counties are the greatest in the country. Asphaltum, cement, soapstone, and ochre are being developed by capitalists, while granite, marble, salt, slate, phosphates, and marls long have been used.

AN ARKANSAS WINTER SCENE, WALNUT RIDGE

The winter snowfalls in Arkansas are as a rule neither deep nor long in persistence. They are sufficient in quantity, however, to cover the ground and impart a most attractive appearance to a rural landscape that has been denuded of its summer mantle of green.

PENTER'S BLUFF, INDEPENDENCE COUNTY

Scenery of a mountainous character abounds in Independence and neighboring counties. Along the White River are rocky bluffs of striking ruggedness, among them that called Penter's Bluff. The latter is a steep cliff of limestone and sandstone, which reaches in places a height of some 400 feet. Along the foot of the precipice extends the track of a railway.

The State abounds in interesting natural features which make it favored by visitors from all parts of the East and West. The Hot Springs Reservation in Garland County contains seventy-four thermal springs, the mean temperature of which is about 136°. The waters, which carry in solution carbonic acid and several carbonates, issue from the base and sides of Hot Springs Mountain in unknown quantities. The medicinal properties of the waters have given them a wide repute. Other medicinal springs much resorted to by visitors are the Ravenden in Randolph County, the Heber in Cleburne County, and the Searcy in White County.

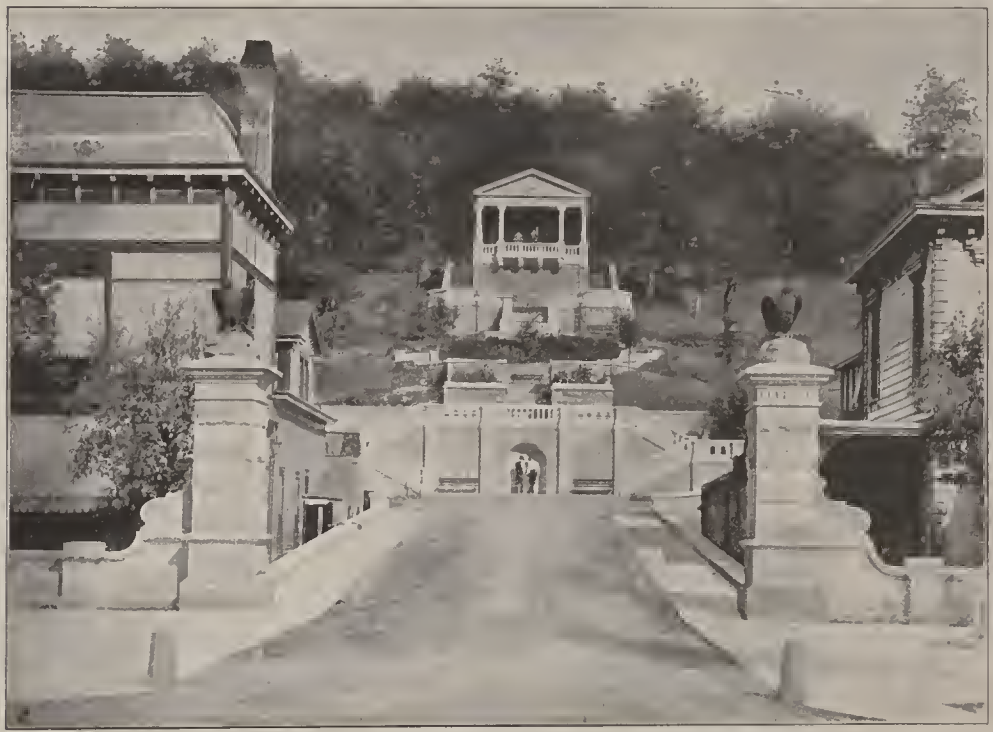
Forests and Manufactures. One of the chief sources of the wealth of the State lies in its extensive and valuable forests. Large areas of the uplands and river bottoms are covered with growths of merchantable timber, which have been made accessible in comparatively recent years by the construction of railroads. In some parts the streams can be used for rafting lumber. Pine and white oak are

in demand for general purposes. Other woods are cypress, valued for making shingles; cedar, used for posts; elm, fitted for wagon timber and hoops; post oak, adapted for wagon hubs; black walnut, used in cabinet work; and white hickory, used for tool-handles.

The manufacturing industries that are based on the products of the forests are by far the most considerable in the State, their combined output being rated at almost three-fifths of the value of all products. These include chiefly planing-mills and similar plants. Second and third in rank, respectively, among the manufactures are flouring and grist-mill products and cotton-seed oil and cake. Next comes the ginning of cotton, in which Arkansas is one of the leading States. During the single decade closing with 1900 the number of establishments devoted to this work was thrice doubled. The presence of railway division points in the State makes the building and repair of railway cars another industry whose product aggregates a large sum annually. It must be said, however, that neither in the extent of its establishments nor the value of its products does Arkansas rank as an important manufacturing commonwealth.

RESERVATION AVENUE AND GOVERNMENT HOSPITAL

The natural beauty of the reservation has been greatly enhanced through improvements made by the Government. Well-kept avenues have been laid out along the limits of the Hot Springs Reservation, and upon these, amid beautiful surroundings, face the bath-houses. A little way up the mountain slope on a natural terrace stands the group of buildings of the Army and Navy General Hospital, belonging to the Government.



ENTRANCE TO RESERVATION, HOT SPRINGS

The famous hot springs of Arkansas lie on a mountain side within an area which forms a Government reservation under national control. The revenue from the springs is used to beautify the property, and very effective is the result. Massive stone stairways and retaining walls mark one of the entrances to the Government's domain.

COTTON-GIN AT WALNUT RIDGE

By the mechanism of the cotton-gin the raw cotton from the fields is treated for the separation of the seed from the fiber. The latter is then baled for shipment to the warehouses or to the factories that transform it into textile products. The cylindrical bale is now favored as best adapted by its form and strength for protecting the cotton from damage in transit.

Chief Cities. Little Rock, the capital, and the largest city in the State, is the commercial and railroad center of the State and one of the great cotton marts of the country. Fort Smith, situated near the junction of the Arkansas and Poteau rivers, and lying in the very heart of the richest coal-field in the State, enjoys the advantages of cheap fuel, and its manufactures are therefore attaining considerable prominence. Pine Bluff, situated at the head of low-water navigation on the Arkansas River, is the trade center for an agricultural region famed for its fertility and productiveness, and is one of the leading cotton markets of the State.

Hot Springs is the most widely known of Arkansas cities. The mineral springs here give the city its fame. Owing to the remarkable curative powers of the waters the city has become one of the most prominent health resorts in the United States. Fayetteville, in Washington County, is the home of most of the departments of the State University. In the vicinity are fine mineral springs. Eureka Springs is a much-frequented pleasure and health resort situated in the midst of the picturesque Ozark Mountains, which are clothed with dense pine forests that add to the attractiveness of the landscape.

VIEW ON THE LITTLE RED RIVER IN WHITE COUNTY

Historical. The region now known as Arkansas was probably visited by De Soto in 1542. The oldest settlement, so far as known, was that founded by the French in 1686 at Arkansas Post, about twenty-two miles due west of the mouth of the Arkansas River. Little was accomplished in the way of colonization, however, until after the founding of New Orleans in 1718. The territory now constituting the State was included in the Louisiana Purchase of 1803. In 1819 a large area was organized as the Arkansas Territory. In 1824 the western part of the Arkansas Territory was erected into a separate district to be known as the Indian Territory. On the 13th of June, 1836, Arkansas, with its present boundaries, was admitted into the Union.

At the outbreak of war in 1861, the Legislature of Arkansas voted against secession. However, in the following May, a convention passed the Ordinance of Secesssion, but in 1869 the Commonwealth resumed its place in the Union.

LOUISIANA

LOUISIANA, situated at the southern end of the Mississippi Valley and bordering on the Gulf of Mexico, embraces a superficial area of 48,720 square miles, of which 45,420 square miles consist of land surface and 3,300 square miles of water surface. Its population is essentially an agricultural one, despite the presence of a number of considerable cities within the limits. The foreign-born element is very small, constituting less than four per cent of the aggregate. The negro element, however, is large and numbers nearly one-half of the State's population.

THE STATE HOUSE AT BATON ROUGE

The city of Baton Rouge, more central and healthful than New Orleans, became the seat of government for Louisiana in 1850. It remained a center of authority until 1862, when Louisiana became the theater of warfare during the struggles consequent upon secession, and the seat of the State government was established elsewhere. In 1882 Baton Rouge again became the capital, the present State House having been completed in time for use by the State officials at the regular session of the Legislature in that year.

Surface Features. In general, it may be said that more than two-thirds of the State has an average elevation considerably below 100 feet. Extensive uplands, however, appear in various sections of the northern country, and in Southern Louisiana detached heights rise abruptly here and there above the surrounding lowlands. The Gulf Lowlands extend inland for about 100 miles: save in a few localities they are not more than ten feet above sea-level. The Mississippi Delta, and in fact the entire coast, is in great part marshy; swamps, lagoons, and lakes cover much of the surface. Bays project inland and sand-bars and islands fringe the shore. Three sections of the Coastal Plain are comprised within the State; their surface is level and but little elevated above the sea. South of the Red River imperfect drainage has given rise to multitudes of the sluggish watercourses known as bayous. Louisiana forms a part of that division of the North American continent which was laid bare by the receding of the Gulf from what is now the Mississippi Valley. Even at the present time the Gulf tries periodically to recover its lost possessions and inundates thousands of square miles along the coast. Geologically the State is comparatively young.

THE CITY HALL, NEW ORLEANS — Copyright, Detroit Photo Co

The City Hall of New Orleans, a marble edifice modeled upon the familiar lines of Greek architecture, is considered one of the most artistic buildings in the city. Its imposing entrance is an example of Ionic style, copied from the Minerva temple on the Acropolis at Athens. Many events of historic interest have occurred within and around the building.

Rivers. Louisiana is not deficient in river area. The Mississippi River constitutes the northern half of the eastern boundary, entering the State at the base line and flowing southeasterly, emptying into the Gulf of Mexico through a large number of arms or distributaries. About 800 miles of its course lie wholly or in part within the State. The Mississippi begins to send off branches to the Gulf near the point where the river crosses the State boundary or base line, and practically all the territory lying south of that line and between the great river itself and the most western branch is included in the Delta. The first and largest of these branches is the Atchafalaya River, which issues from the Mississippi near its confluence with the Red River, and flows southward 220 miles to the Gulf. It is navigable for light-draft boats. Next in importance to the Mississippi is the Red River, which is formed near the northern frontier of Texas, entering Louisiana near Spearman in Caddo Parish and trending southeasterly to unite with the Mississippi a few miles from the point where the latter stream enters Louisiana. It is usually navigable for steamboats as far as Shreveport, a distance of 330 miles from its mouth, and for small boats several hundred miles above that city. The Sabine River, which forms two-thirds of the western boundary and empties into the Gulf through Sabine Lake, about 500 miles from its source, is navigable for small boats at high water through fully two-thirds of its course. The Pearl River forms in its lower course a part of the boundary between Louisiana and Mississippi. In various parts of the State danger from inundation is great, and long levees have been constructed at many points along the watercourses. Particularly is this true along the banks of the Mississippi River, where an almost unbroken succession of levees partly protects the surrounding lowland from the disasters threatened by frequent freshets.

Lakes. Louisiana abounds in lakes. The majority of the fresh-water lakes are expansions of rivers and generally situated in the low, marshy tracts of the State. The salt-water lakes are found in the region of the coast swamps, and are, strictly speaking, but land-locked bays, whose waters rise and fall with the tides. One of the most important of these is Lake Pontchartrain, which is forty miles long from east to west and twenty-four miles wide from north to south.

It is nowhere very deep, but most of the coasting trade between New Orleans and the eastern Gulf ports is carried on through it, steamers ascending by an excavated channel into the heart of the city. Peculiar effects of the overabundance of water within the State are the *prairies tremblantes* (trembling prairies). These broad, grassy tracts, which quake beneath the traveler's tread, are supposed to "float" or rest upon the surface of subterranean waters or on gulfs of thin mud. They are situated in the vicinity of New Orleans

A COTTON CARGO ON THE MISSISSIPPI RIVER

On the lower part of the Mississippi River the transportation of cotton is perhaps the most typical feature of river traffic. Immense cargoes are carried from the shipping centers in the cotton-growing regions to the port of New Orleans, the bales sometimes almost concealing the outlines of the steamers that carry them.

OLD FRENCH FARM HOUSE, CALCASIEU PARISH

In the interior of Louisiana, more particularly in the parishes of the southern portion of the State, are districts that were settled decades ago by the descendants of French colonists, yet they still preserve the characteristics of the early period. Some of the quaint farm houses of the pioneer families are picturesque and interesting, with their long sloping roofs, great brick chimneys, and heavy wooden shutters at the windows.

Climate, Flora, and Fauna. The climate of Louisiana is subtropical. The summers are prolonged and oppressive, but the winters are generally mild, with an average temperature of 53° in the southern and of 45° in the northern part of the State. Frosts are rare and roses bloom out of doors through the winter in the vicinity of New Orleans. The heaviest rainfall is in the summer, spring and autumn being comparatively dry. Much of the surface of the State is wooded. The most extensive sylvan belt is the vast forest of long-leafed pine situated in Southwestern Louisiana and Eastern Texas. In Northern Louisiana there are large areas of short-leafed pine. Live-oak and cypress grow in the southern coastal lands. Evergreens, magnolia, beech, ash, holly, willow, and dogwood, and indeed nearly all trees of temperate as well as subtropical climes, are commonly met with in the forest lands. Palms are found in the forests and also adorn plantations and private gardens. Of the fruits of Louisiana, pears, plums, and berries are perhaps the most widely distributed; figs, too, grow luxuriantly and form an important item of trade. Along the Gulf coast lemons, limes, guavas, bananas, and pineapples are grown, and in the region south of the Red River oranges, cumquats, and pomelos thrive under cultivation.

The native fauna of Louisiana resembles that of the other Gulf States. Bears and deer lurk within the recesses of the swamps. Smaller quadrupeds, such as raccoons, squirrels, wildcats, and opossums, are still to be met. Every bayou is the haunt of alligators, turtles, lizards, and snakes. The important game-birds are the turkey, wild goose, duck, and the quail. In winter the State is the habitat of all varieties of migratory birds fleeing from the Northern snows.

Resources and Industries. The vast majority of the people of Louisiana are engaged in the cultivation of the soil and in kindred pursuits. The distinctive crop is sugar-cane, Louisiana being the only State in the Union which has this as its staple crop. Second in importance among the agricultural products is cotton. Rice growing is an extensive industry, a great part of the annual yield of rice in the United States being raised in the marshes of Louisiana. Fruits and miscellaneous vegetables form important sources of income to the Louisiana farmer. The pecan tree grows naturally in certain sections and is being planted extensively for its nuts. Corn, oats, and hay yield plentiful harvests. In certain parts of the State, particularly in districts where the short-leafed pine or the long-leafed pine is found, the yellow leaf tobacco is grown. Ramie, hemp, and jute are cultivated for commercial purposes. The raising of live stock is carried on and is increasing in importance.

Since almost two-thirds of the State consists of wooded lands, the lumbering interests naturally are extensive. Short-leafed and long-leafed pine cover thousands of acres in the north and west, while cypress, which grows in the marshy lowlands, is marketed in immense quantities annually. The sole minerals produced in considerable quantities are salt, found chiefly on islands of the coast, and sulphur, mined in Calcasieu Parish. Several oil-fields have been developed, however, and promising deposits of lignite, marl, and gypsum have been located.

Among manufacturing industries the refining of sugar is, of course, the most widely pursued and the most remunerative. The product of the refineries is nearly half of the

THE COTTON EXCHANGE, NEW ORLEANS Copyright, Detroit Photo. Co.

The greatest center of the world's trade in cotton is the Cotton Exchange of New Orleans, which occupies a handsome building located in the busiest part of the business portion. Here are carried out commercial transactions of magnitude and of world-wide importance.

MANSION NEAR BATON ROUGE

About thirty miles below Baton Rouge, on the east bank of the Mississippi River, is the Burnside sugar plantation, an old-time estate on which stands a mansion that is notable as the former home of General Burnside, the Confederate leader.

manufactured output of the State. Next to the sugar product in value comes the output of lumber products. The manufacture of cotton-seed products is coming to be a most important industry. The raw material for this is in large part shipped to New Orleans from neighboring States. Establishments for the cleaning and polishing of rice enjoy a flourishing trade. The manufacture of bags and sacks from burlap and similar cloths is extending, as also that of ready-made clothing. Other important manufactures are the products of the numerous tobacco factories, foundries, and machine shops.

GATHERING THE CANE ON A SUGAR PLANTATION

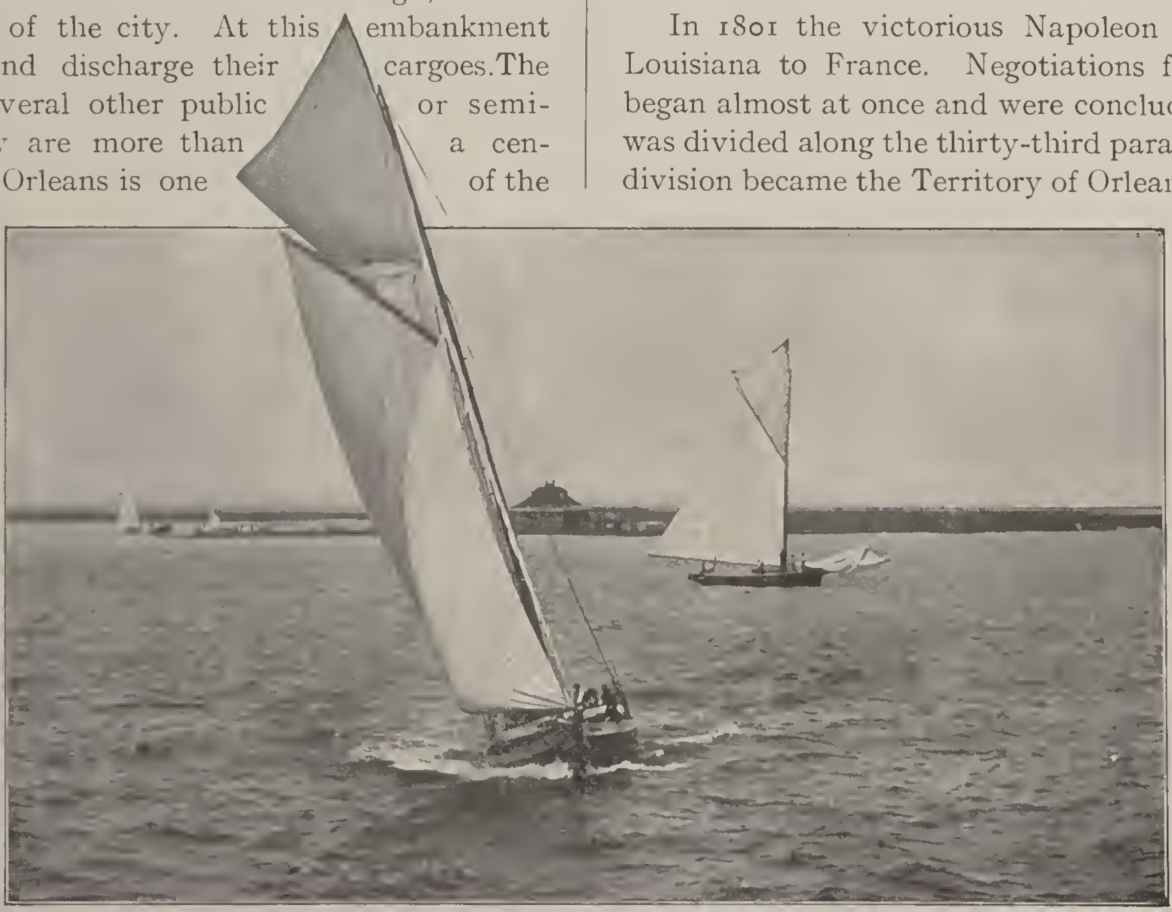
Louisiana is the great sugar-growing State of the Union. The industry began toward the close of the eighteenth century, when the region was a French colony. Etienne de Bore raised the first commercial crop with such success that other planters were led to follow his example. Sugar-cane is really a gigantic grass, growing to a height of ten to fifteen feet. When thoroughly ripened in the field the stalks are cut down and gathered for transportation to the sugar-mill. This work employs a large number of laborers.

Chief Cities. New Orleans, the metropolis of the State, is situated on both banks of the Mississippi. It is built upon land that slopes from the river toward a marshy district which lies considerably below the high-water mark of the stream, whose overflow is prevented by a great levee, fifteen feet wide and fourteen feet high, extending along the entire river front of the city. At this embankment steamers and boats receive and discharge their cargoes. The Cathedral of St. Louis and several other public or semi-public edifices within the city are more than a century old. Commercially New Orleans is one of the leading cities of the Union.

Shreveport is a thriving city on the Red River. It is an important cotton market, has a valuable trade in hides and wool, and contains extensive cottonseed-oil mills and fertilizer factories. Baton Rouge, the capital, is picturesquely situated on the bluffs of the Mississippi River. Among its public structures are the buildings of the State University The town of Gretna, opposite New Orleans, ranks second as a manufacturing center in the State. Lake Charles is an important point of distribution, whence the lumber of Southwestern Louisiana is shipped to the great markets of the country. New Iberia, on the Bayou Teche, is an industrial center and has salt mines in the neighborhood. Alexandria, on the Red River, and Donaldsonville, on the Mississippi, have local interests connected with cotton and sugar growing. Plaquemine is a lumber town.

Historical. The territory now known as Louisiana was first visited by Europeans in the autumn of 1541, when De Soto and his men followed the course of the great river along its western shore and camped for the winter on the banks of the Ouachita River. In 1682 La Salle descended the Mississippi River to its mouth. In honor of Louis XIV he gave the name of "Louisiana" to the vast but undefined territory stretching westward from the Alleghenies. By royal grant in 1717 Louisiana became subject to the Mississippi Company created by John Law. New Orleans was founded and the seat of colonial government transferred to it from Mobile, but in 1732 the sovereignty reverted to the Crown. At the close of the Seven Years' War in 1763, France ceded to England all the land east of the Mississippi River, with the exception of New Orleans, and to Spain all the land lying west of that stream, together with the district around New Orleans that had been withheld from England.

In 1801 the victorious Napoleon forced a recession of Spanish Louisiana to France. Negotiations for a sale to the United States began almost at once and were concluded in 1803. In 1804 the region was divided along the thirty-third parallel of latitude, and the southern division became the Territory of Orleans, which, in 1812, was admitted into the Union as the State of Louisiana. During the War of 1812 an invading British force met severe defeat at New Orleans at the hands of General Jackson's army. On the outbreak of the secession movement in 1861 Louisiana speedily espoused the Confederate cause and attempted to guard the Mississippi against invasions, but in April, 1862, Admiral Farragut passed through the mouth of the Mississippi with his Federal fleet, silenced the forts below New Orleans, and captured the city. The Federal Government retained possession of the city throughout the war.



YACHTING UPON A LOUISIANA LAKE

In Southeastern Louisiana where Lakes Maurepas and Pontchartrain extend many miles between low-lying shores are resorts favored by the sportsman and summer visitor. These lakes are admirably adapted for boating, and club-houses situated at advantageous points are headquarters for the yachting fleets.

TEXAS

TEXAS is situated in the southwestern part of the United States. Its total area is 265,780 square miles, or nearly one-twelfth of the area of the United States exclusive of Alaska. The State has a foreign-born population of about six per cent. Its colored inhabitants, however, form one-fifth of the whole people. Owing to its vast unpopulated areas the average density is less than that of any other State except Florida.

Surface Features. The greater portion of the surface of Texas belongs to the Southern Coastal Plain. The coast is bordered almost throughout its length with sand-bars and low, sandy islands. Inland lies the Black Prairie, a level and fertile region constituting a great cotton-growing district. Then follows the Grand Prairie, which consists of vast grassy expanses broken by wooded districts along the borders of its many streams. Finally, at the northwest lies the even-topped plateau of the Llano Estacado or Staked Plain, which extends from the valley of the Pecos River on the west to the head waters of the Colorado, Brazos, and Red rivers on the east, and from the valley of the Canadian River on the north to the Pecos River on the south. The surface of this plateau is gently undulating, and vegetation is scanty owing to the dryness of the climate and the soil. South of the Llano Estacado and near the western border the State reaches its greatest altitude in the Guadalupe, Hueco, Eagle, Apache, and Diablo mountains, the highest elevation being Baldy Peak (8,382 feet).

Rivers. The rivers of Texas are numerous and vary in length from the Rio Grande, which has a course of 1,800 miles, to the short rivers rising in the coastal lowlands and flowing only a few miles to the sea. The Canadian and Pecos rivers from their adjacent sources in New Mexico diverge to the north and south, flowing through canyons which they have cut in the Llano Estacado, their waters ultimately reaching the sea at widely separated points. Between them flow the Red, Brazos, and Colorado rivers with their tributaries. These streams often become entirely dry in the west, but during the periodical freshets they swell to enormous proportions and carry to the lower plains the rich red loam of the western country. The Sabine, Trinity, Guadalupe, Neches, and Nueces rivers are also important. The Rio Grande separates the State from Mexican territory; it is usually of slight depth, and although at regularly recurrent periods it becomes a great swelling torrent, its volume is decreasing year by year. Notwithstanding its great length the Rio Grande has little value as a waterway, for besides being for the most part shallow it is obstructed by rapids and sand-bars.

THE CAPITOL AT AUSTIN

When Texas was an independent republic the site of Austin, then on the western frontier of settlement, was selected as the capital in order to stimulate westward migration, and was platted by a public commission. In 1839 the town became the administrative center of the republic, and was the State capital after annexation, despite the vigorous rivalry of other cities. In 1888 the State government first occupied the present Capitol, which is one of the largest public buildings in America.

Climate. The vast area included within the bounds of Texas, together with its variations of altitude and latitude, affords considerable diversity of climate. In the valley of the Rio Grande frost is almost unknown, the mean annual temperature near the mouth of the river being 72°. From the latitude of Austin southward snow seldom appears, but it is more frequent along the Red River where the mean annual temperature is only 60° and in the northwest where it is 56°. Cold winds known as "northers" blow at intervals between October and May. In the summer constant breezes blowing inland from the Gulf temper the heat and add to the healthfulness of the climate. In the coastal lowlands and on the Black Prairie the rainfall is abundant for all agricultural purposes, but toward the west it decreases and the amount varies greatly with different years, the growing crops in that part of the State suffering sometimes from drought. The heaviest rains occur in the northeastern portion.

Flora and Fauna. The flora of Texas is rich and varied. Forested areas cover a territory almost equal to the whole of New England. The pine belts of Eastern Texas and the great oak forests extending through the central region are important sources of wealth. North of the long-leafed pine belt is an area of short-leafed pine, with some oak and hickory trees and stunted specimens of black-jack, Spanish oak, and post-oak. Cypress of a large growth is found in the swamps of the coast and along the watercourses. In the better-watered portions of the State,

THE ALAMO, SAN ANTONIO

The famous Alamo, an old mission church erected in 1718, stands on the plaza of San Antonio. It is not as a church, however, that it is treasured by Texans as a historic monument, but because of the memories of a bloody day in 1836, when a band of patriots made the Alamo a fortress and died heroically in a terrific struggle against Mexican besiegers, founding by their sacrifice the Texan Republic.

the maple, pecan, sycamore, magnolia, mulberry, palmetto, mesquit, and Osage orange flourish. Between the Colorado River and the Rio Grande lie a series of semi-arid plains, the characteristic vegetation of which is the cactus. In this district the true buffalo-grass is the principal plant.

Of the fauna of the State, the bison, once common on the plains, exists now only in captivity. In general, the wild animals are disappearing before the advance of civilization, but the gray wolf, black bear, wildcat, lynx, and other species are still found. During the winter months quail, snipe, wild turkey, wild geese, pheasants, prairie-chickens, and ducks abound.

Agricultural Industries. The chief wealth of the State is derived from the rich farming lands of the prairies and the coastal lowlands. Texas leads the States in the production of cotton, contributing about one-quarter of the total cotton crop for the United States. Next to the cotton crop comes that of corn, which grows well over nearly the entire State. Wheat, oats, rye, Kafir-corn, and barley are also grown in practically all sections of the State. The rice belt includes all the counties bordering on the Gulf and several adjoining counties. Texas has attained second place among the rice-producing and sugar-growing commonwealths of the Union. Tobacco is also largely grown. Orchard fruits are raised in every section; peaches of excellent flavor constitute by far the most valuable crop, large quantities being sent to the markets of the northern cities. Fig culture prospers in the coast region. Of the small fruits, those most extensively grown are blackberries, dewberries, and strawberries.

CARVED WINDOW OF OLD MISSION

One of the most beautiful and graceful examples of the detail work of mission architecture in the former Mexican regions is the carved stone window on the west side of San José Mission, near San Antonio, which was probably carved by some Indian convert of early days.

Fortunately, the larger part of the State belongs to the humid region, but the land comprised between the Rio Grande and the Pecos River is in general arid, having a limited rainfall. The mildness of the climate of Texas and its great variety of nutritious grasses peculiarly adapt it to stock-farming. The western section is devoted to this branch of industry, great tracts which are too dry for the raising of crops furnishing admirable pasturage for cattle and sheep. Since the Boer war of 1899 the State has also been known for its horses and mules.

Forests and Mines. The eastern part of Texas is a region of forests which yield excellent varieties of building timber. Hard woods, such as the oak, ash, and elm, are found, although by no means abundantly, in a district contiguous to the Red River in the northwestern part of the State. The indigenous mesquit, which grows in the western section, is chiefly valuable as material for fuel and fencing.

Development of mineral resources, except as to the oil-fields, has been slow in Texas. Petroleum is the most important product and the oil-fields of Beaumont and Corsicana are world-famous. Three distinct coal-fields exist, largely unworked; the mines of Erath County are the best known. Iron ores of splendid quality are mined in and around Llano County. Cinnabar deposits in Brewster County promise to become of national importance. Silver, copper, lead, zinc, gypsum, and salt have been worked and their commercial value proven while the deposits of sulphur, marls, tin, and asphalt, almost or wholly untouched, are believed to have great future value.

Manufactures. The largest manufacturing interest of the State is lumbering, for which the eastern counties afford an abundance of material. The preëminence of Texas as a cotton State is reflected in the extent of the industry which has been built up through the utilization of cotton-seed. Several hundred thousand cattle annually are fattened for market on cotton-seed cake and meal, and these products are also largely used as fertilizers. The ginning of cotton is an important industry in the State, and the manufacture of cotton has also been begun in a dozen places by the erection of cotton mills, some of which are of considerable size. The meat-packing industry, which is of recent development, is growing, Dallas and Fort Worth having notable establishments. Flouring and grist mills have followed the expansion of the grain-raising area and the development of rice-growing has brought about the erection of rice mills in Southern Texas. The manufacture of leather goods, for which the State has special advantages, is also of good proportions. Sugar refineries

SIERRA DIABLO, EL PASO COUNTY

In the extreme southwest of Texas is a hill country almost mountainous in its character. The Sierra Diablo, a carboniferous butte of 200 feet elevation, at the foot of which silver is mined, is a notable feature in this section of the State.

THE OLD CHURCH OF CONCEPCION MISSION, SAN ANTONIO

Built as early as 1730 under Spanish rule, to serve the double purpose of church and fortress, the walls of old Concepcion Mission stand as stoutly to-day against the assaults of time as ever. The loopholed windows, against which hostile arrows and bullets were hurtled in former days, now overlook peaceful meadows only, and the grass-grown courtyard is quiet, save for the footfalls of the Franciscan friars who have reclaimed the custody of the church, and now guard its altar with zealous care.

SEA-WALL AT GALVESTON

Since the awful disaster of 1900 a great sea-wall has been built to guard Galveston from similar danger in the future. It extends over three miles along the Gulf shore, and has a safe height of seventeen feet above the mean low tide.

are being operated with excellent success and the industry of making paper from the refuse cane fiber is being tried.

Two large smelters are located at El Paso and Arizona, handling ores from New Mexico. The manufacture of iron has begun and encouraging results have been attained. Cement manufacture is already important in the State. Oil refineries exist in connection with the oil-fields.

Chief Cities. Galveston, on an island lying west of the mouth of Galveston Bay, is commercially the most important city in the State, ranking second among the cotton-shipping ports of the country. Its harbor has an anchorage area of three square miles. Its government is notable as being vested in a commission of two elected and three appointive members. San Antonio, established in 1714, is now the largest city in Texas and, from a historical point of view, one of the most interesting cities in the United States. In the heart of the city is the historic Alamo. By means of its extensive railway connections San Antonio largely controls the trade of Western Texas.

Houston is the leading commercial and railway center in the State and possesses large car-shops; it is an important cotton market and has extensive manufactures. Dallas, located on Trinity River, is the metropolis of Northern and Eastern Texas and the foremost industrial municipality in the State; the chief manufactures are saddlery and foundry and machine-shop products. Fort Worth has the largest packing-house and stock-yards south of Kansas City, besides large grain elevators, well-equipped car-shops, and flouring mills. Austin, the capital, is located on the Colorado River, and is the seat of the State University. El Paso, situated on the Rio Grande near the extreme western corner of the State, ranks third as a manufacturing city, and has also an extensive commerce with Mexico. Laredo, also on the Rio Grande, is an industrial town. Waco, on the Brazos River, has some importance as a health resort.

Historical. The first successful settlements in Texas were made in 1712-14 by the Spaniards, who established a chain of missions from the Rio Grande to the Sabine River. In 1762 the long dispute between France and Spain as to boundaries was ended by the cession to the latter of all the French possessions west of the Mississippi, but the exact limits of the territory included in the transfer were left uncertain. In 1800 Spain re-ceded Louisiana to France, and in 1803 Napoleon conveyed it to the United States. The boundary controversy that followed was ended by a treaty in 1819, whereby the Sabine was adopted as the dividing line and the United States relinquished all claim to Texas. Mexico became a republic in 1821 and in 1825, on the adoption of the Mexican constitution, Texas and Coahuila were admitted as a single State. The American colonies that had been planted in the territory grew strong enough to rebel in 1836, and win independence. For a period of nearly ten years thereafter, Texas remained an autonomous State.

In 1843, during the administration of President Tyler, the republic applied for annexation to the United States. The request was rejected by the Senate, but in 1845 Texas was admitted by joint resolution of Congress. The annexation was objected to by Mexico, which republic was further incensed by a dispute over the boundary, Texas placing it, perhaps without warrant, at the Rio Grande and Mexico at the Nueces River. In March, 1846, Gen. Zachary Taylor, with the American forces, took possession of the country in dispute and the Mexican War ensued. The struggle was ended by the Treaty of Guadalupe-Hidalgo in 1848, according to the terms of which the Rio Grande was agreed upon as the boundary. In 1861 a State convention adopted an ordinance of secession, and three weeks later the people of Texas ratified the action. Military operations were conducted within the State. The last battle of the Civil War was fought on the Rio Grande near Palo Alto in May, 1865, and Galveston, which surrendered in June, was the last seaport held by the Confederates. The State resumed its place in the Union in 1870.

THE RIO GRANDE ON THE INTERNATIONAL BORDER, NEAR EL PASO

The Rio Grande, which separates Texas from the Republic of Mexico, is a river of varying volume. It is swollen in the early summer months by the melting of winter snows in the mountains where it has its headwaters, but the passing of the flood leaves it a shallow creek wandering lonesomely among sand-bars and mud-banks. Around El Paso the river is very attractive when at its best. A view upstream takes in the rough hills of the Texas side on the right and the low Mexican shore at the left.

SCENE IN COTTON PICKING TIME

OKLAHOMA AND INDIAN TERRITORY

OKLAHOMA is a Territory of the United States lying south of Kansas and having an area of 39,030 square miles, inclusive of about 200 square miles of water surface. The Indian Territory also lies south of Kansas, adjoining Oklahoma on the east. Its area is 31,400 square miles, including about 400 square miles of water surface. Oklahoma was created out of the Indian Territory and seems likely to absorb the remainder of the latter at no distant date, making a commonwealth with a total area of 70,430 square miles, about the size of Missouri.

Surface. Physically Oklahoma is an undulating prairie with an average altitude of about 1,500 feet and a general inclination toward the southeast. Across the northern section is a ridge extending westward from Noble County to Woodward County, where the ridge culminates at Goodwin (2,528 feet). At the western extremity of Beaver County the surface has an elevation of more than 4,000 feet. The country is also diversified by a range of low hills that begins at the eastern central border and, trending southwesterly, terminates in the southern part of the Territory in the Wichita Mountains, which attain about 3,000 feet. In the country south of the Canadian River occasional patches of timber are scattered over the fertile and well-watered prairies, which are carpeted with a thick covering of nutritious grasses. The country north of the Canadian River, especially the region west of the meridian of 98°, is not so well favored. Vegetable life is less abundant and extensive regions consist of salt plains notably in Woodward and Blaine counties. In Beaver County the character of the country is similar to that of Southern Kansas. The streams in the Territory are of small volume.

The surface of Indian Territory has a general declination of level land and valleys toward the east and southeast, in which directions all streams flow. It is for the most part level or gently undulating, the only elevated land being the continuations of the Ozark and Ouachita mountains from Arkansas. The former extend but a short distance into the Territory, north of the Arkansas River, and the hills gradually disappear in the undulations of the prairie; the latter in the southeast presents elevations far more marked. The valleys between these mountains are broad and, as a rule, evenly rounded out. The separate hills rise from 500 to 1,000 feet above the valleys, and from 1,600 to 2,100 feet above sea level. The highest altitude of the Territory is found among these peaks in Sugar Loaf Mountain (2,600) on the Arkansas border. Toward the south the hills increase in height and become more rugged in appearance. The lowest part of the Territory is about 300 feet above sea-level.

OFFICES OF THE TERRITORIAL GOVERNMENT AT GUTHRIE

Guthrie became the capital of Oklahoma in 1890, when the territory was first organized. The territorial government is yet without official headquarters, and public business is transacted in offices in one of the principal business blocks of the town.

Rivers and Climate. The drainage of the two Territories finds an outlet to the Mississippi through the Arkansas and Red rivers. The former enters from Kansas and crosses in a southeasterly direction, receiving from the west the Cimarron and Canadian rivers, and from the north the Verdigris and Grand, or Neosho. The Red River enters from Texas, forming the southern border of both Territories and receiving as tributaries from the north the Washita and minor streams. The Indian country is in the main well watered, but in Oklahoma the streams diminish to slight volume during the warmer months. They are, however, of great importance to the prairie country at all times as a source of the necessary water supply.

The climate of the two Territories is mild and healthful, having a mean annual temperature of about 60°. The summers are long and hot, while the winters are comparatively short and marked by little snowfall. Like Northern Texas the winds called "northers" occasionally cross the country chillingly, but the temperature reaches the zero point at infrequent intervals and very seldom remains at a low point for any considerable time. Indian Territory resembles Arkansas physically and has ample rainfall. Oklahoma is less favored, since rainfall decreases toward the west.

BROADWAY, SOUTH FROM MAIN STREET, OKLAHOMA CITY

The towns of Oklahoma have grown rapidly despite their newness, the territory's incoming flood of farming population demanding such services as are performed for them by urban centers. Oklahoma City, the metropolis of the territory, owes its leadership partly to its local trade with the adjacent district and partly to wholesale and jobbing relations with the lesser towns of the territory. Blocks of substantial business structures, with water-works and electric lights, indicate the town's prosperity.

Droughts occur in the prairie country at times, and the more extreme western part lies in the semi-arid belt that crosses Western Kansas and Nebraska. In these western counties groups of rainy and dry years alternate; during the former period crop-growing is successful in every part, but during the latter artificial aid is absolutely necessary to secure results. Irrigation, both by surface reservoirs and deep wells, must therefore accompany development of these counties, in order to counteract the effect of climatic variations.

Historical. Except for Beaver County, these Territories came to the United States as part of the Louisiana Purchase; the county mentioned was annexed with Texas. Spanish explorers had reached the region in the 16th and 17th centuries, but it was unsettled and almost uninhabited until after 1820, when it began to receive bands of Indians from east of the Mississippi. Indian Territory practically dates from 1828, when a line was drawn between the Indian country and the territorial area of Arkansas. From time to time the Indian population was increased by the removal of tribes from other parts of the republic, and the separateness of the Territory was respected until 1866. The Creeks and Seminoles having sided with the Confederacy, they were in that year forced to surrender part of their reservations.

White adventurers now drifted into the Territory in large numbers, and from 1879 onward the Federal Government was obliged to eject intruders from time to time. In 1889 new treaties with the Indians permitted the opening of vacant lands to white settlers. The settlement of Oklahoma in a day is one of the most dramatic events in American history. In 1890 the Territory of Oklahoma was erected by Congress. In 1904 an effort to create a State by uniting the two Territories failed.

SCENE IN THE WICHITA MOUNTAINS

The most picturesque scenic region of Oklahoma is that of the Wichita Mountains, a group of high elevations intersected by ravines and sloping valleys. The timber supply is scanty on the mountain sides, but the growth of blue-stem and grama-grass is luxuriant and of value for grazing purposes. The summits are bare wastes of gray granite boulders.

OKLAHOMA

Resources and Industries. Agriculture is the dominant form of industry in Oklahoma. The soil is fertile and the climate favorable to crop growing. Wheat and cotton are the staple crops for export purposes. Corn is grown in great quantity, but is used at home. Among forage crops the leading ones are alfalfa, kaffir corn, and sorghum. Potatoes and sweet potatoes are cultivated for the market in Eastern Oklahoma, while peanuts and castor-beans have been grown to some extent. Orchards are extending, the production of apples, peaches, pears, plums, berries, and grapes promising to become of great commercial importance as the orchards and vineyards reach maturity. Stock-raising, formerly done on the open ranges, is now restricted to small herds of better grade than were before owned. Horses and mules are bred, and the raising of sheep and Angora goats has already become an established branch of pastoral effort.

Oklahoma is not a great timber country, although there is much forest area, containing such woods as black walnut, honey locust, hickory, sycamore, soft maple, yellow pine, red cedar, wild cherry, elm, white oak, red oak, pecan, and willow. The most of the forest is in the eastern part. Mineral areas exist in the Wichita Mountains, where gold and copper are found in paying quantities, and oil has been found. In other parts of the Territory are vast beds of gypsum and deposits of salt, with some evidences of natural asphalt deposits.

The most highly-developed branches of manufacturing in Oklahoma are all based upon agricultural products and upon mineral deposits. The various plants include creameries, cheese factories, canneries, broom factories, and flouring mills, with cement works, brick kilns, and salt works. Concentrating and smelting plants are being prepared for operation to test the ores found in the Wichita mountains.

Chief Cities. The largest town of the Territory is Oklahoma City, on the North Fork of the Canadian River; it is one of the chief railway centers of the Territory and a distributing point of merchandise for the southwestern counties. Next in size is Guthrie, the capital, situated on the Cimarron River; it is also a railroad center and is a rival of Oklahoma City as a supply point of the southwestern section. Shawnee, on the North Fork and near the eastern border, the third city in size, is an important cotton and potato market and possesses railroad shops and manufacturing concerns. Enid, in the northern part of the Territory, is a shipping point for wheat and flour, and the chief railway center of the northern counties. El Reno, on the North Fork, is a cattle mart, besides being a jobbing center and milling town. Lawton, in the extreme southern portion, is a supply point for a rich agricultural district. Hobart and Anadarko, a little more northerly, are thriving towns, possessing jobbing houses, cotton compresses, and mills. Norman, seat of the Oklahoma University, is a market town situated about twenty miles south of Oklahoma City on an elevated and healthful site. Alva is another educational center, with a normal school.

AN AUTUMN THRESHING SCENE, NEAR ENID

But a few years have passed away since Oklahoma was an untilled prairie land, and almost the only evidence of occupation came from Indian tepee or hunting camp. Then the rank growth of prairie grass spread mile after mile across the face of the country where now in summer and fall may be seen hundreds of threshing outfits, beating out grain of the finest quality in fields whose annual output gives evidence of the wonderful fertility that has attracted settlers to the region.

COUNCIL-HOUSE AT TAHLEQUAH

Tahlequah is the tribal capital of the Cherokees, the most advanced in civilization of the various Indian nations that inhabit the territory allotted to them. The council-house of the Cherokees is a two-story brick building of not unpleasing appearance, in which the tribal legislature has held its sessions for many years.

INDIAN TERRITORY

Agricultural Industries. Farming and cattle-raising are the two great industries of the Territory. The Indian population engages in farming to some extent, but as a rule the Indians prefer to lease land to white residents of the country for actual tillage. The ample rainfall makes the Territory a splendid farming region, and the soil produces all the crops that are grown in Oklahoma. Wheat and cotton are the principal products of the Territory at present. Corn, oats, barley, and rye are grown, each in lesser amount. Hay is not as yet in great demand, owing to the opportunities for free pasture, and is therefore little grown, and the same is true of fruit. Stock-raising is carried on extensively, large areas being under lease to stockmen, who pasture cattle on the open ranges. Hogs are owned in great numbers.

Manufacturing is not extensive, although some factories and shops are conducted in the various towns. The greater number of these are based upon the agricultural or pastoral resources of the country; there are many flouring or feed mills, and cotton compresses exist in the principal cotton centers.

Forests and Mines. The forest lands are mostly in the Choctaw reservation and comprise walnut, pecan, pine, oak, locust, elm, and ash. They are not yet opened to lumbering work, but will support a considerable industry when cutting is permitted for commercial purposes. The mineral wealth of the Territory is slowly being opened to the world. Coal and petroleum are the principal products at present. The Choctaw Nation is the seat of the best-developed coal mines, but it is believed that other mines will be developed in other parts of the Territory in time. Oil and gas are found in the Cherokee Nation, near the Kansas border. Deposits of silver, lead, zinc, copper, and asphalt are known to exist but the quantity is uncertain.

The coal of the Indian Territory is a semi-anthracite suitable for extended use in an industrial way. It is the basis of a fast-developing coking industry in those districts where mining is now carried on. Commercial exploitation of the coal-fields in the Territory began in 1872, when the first railroad was built into the coal-producing sections. The greater part of the coal mines are embraced in the same great coal-bearing area which is operated in Arkansas and Kansas, but a northern extension of the Texas coal-field is found in the neighborhood of Ardmore, across the southern boundary.

CHILDREN OF AN INDIAN SCHOOL DRESSED IN THEIR TRIBAL COSTUMES.

Government. The Indian Territory has never possessed a unified government like those formed in other Territories. It is really a group of distinct reservations, in each of which there exists an Indian government, subject only to the authority of the Federal Government at Washington. The five civilized nations of the Cherokees, Creeks, Choctaws, Chickasaws, and Seminoles own practically all the country, the land in each reservation, as a rule, being owned in common by the whole tribe, and shared by intruding whites who hold residence by the permission or sufferance of their Indian neighbors.

BUSINESS BLOCKS IN MUSKOGEE

Muskogee, one of the two leading towns of Indian Territory, is quite as modern in its appearance as any of the urban centers of the recently settled sections of the West. Around it lies an excellent agricultural and stock-raising country, and in the vicinity are evidences of natural wealth in the form of petroleum. There has been a large influx of non-Indian population and considerable capital has been invested here.

Proceedings are now under way, however, for the allotment of territorial land in severalty to individual Indians, to be followed by the abandonment of tribal government and the creation of unified administration on the commonwealth model. A portion of this work has been carried out by the federal commission having it in charge. Under its direction the various town-sites in the Territory have mostly passed into the hands of white residents, and the areas having coal or timber are being set aside for sale. An act of Congress divided the Indian Territory, in 1904, into twenty-five recording districts, whose respective bounds will form sometime, it is believed, the lines of new counties.

Cities. Ardmore, the largest town in the Territory, is near the Texas border; it is a center for cotton, grain, and cattle shipments and the supply point of a well-settled agricultural district. Muskogee, rivaling it in size, has something of the status of a territorial capital, being the seat of Federal authority in the Territory; it is also an educational center. South McAlester is the railway center and jobbing point of the Choctaw mining district. Chickasha, on the western edge of the Territory, is an agricultural market town. Coalgate is a coal-mining town, as are Durant and Wilburton. Vinita is a railway junction point and farming center in the northern part of the Territory.

KANSAS

KANSAS is one of the Western Central States. The area of the State is 82,080 square miles, of which 380 square miles are water surface. Exclusive of the outlying possessions, Kansas is the geographical center of the United States; its northern boundary lies almost midway between the northern and southern limits of North America, while the meridian of 96° W. long., which traverses the eastern section of the State, marks the half-way point across the continent. Its population is very largely white and native American, less than nine per cent being of foreign birth, and less than four per cent being negro.

Surface Features. The surface in general is an undulating plain sloping from the northwestern to the eastern and southeastern boundaries, with an average descent of seven feet to the mile, the elevation along the northwestern border being from 3,000 to 4,000 feet above the level of the sea, and that at the mouth of the Kansas River being only 750 feet. In some sections of Kansas the general uniformity of the surface of the plains is modified by valleys, usually broad and shallow, the result of river erosion. Along the bottom lands frequently occur bluffs that attain an elevation of from 50 to 300 feet. Receding from the bluffs that border the river valleys the surface consists of the level or gently rolling upland prairies characteristic of Kansas as a whole.

THE CAPITOL AT TOPEKA

Topeka was a center of anti-slavery politics in territorial days when Kansas was the battle-ground of opposing principles, and when the anti-slavery party came into control under the newly created State government, in 1861, the city become the capital of the commonwealth. Occasional efforts to remove the seat of government to a more central site have regularly failed. The Capitol, the erection of which extended over a long period, was occupied by State officials as early as 1870.

Nature has furnished Kansas with ample drainage. The waters of all of its rivers ultimately reach the Mississippi, either directly through the Arkansas River, or indirectly through the Missouri River and its tributaries. The last-named river forms the northeastern boundary of the State, and is fed by many Kansas streams, including the Kansas or Kaw River, which is the largest and most important waterway in the State. The Republican, Smoky Hill, Big Blue, Solomon, and Saline are affluents of the Kansas. The southern portion of the State is drained by the Arkansas River, which rises in Colorado and traverses the arid plains of Western Kansas.

Climate, Flora, and Fauna. The climate of Kansas is exceptionally healthful. The atmosphere is one of especial clearness, a property due to the dryness resulting from the general high altitude of the State. Although the temperature in summer frequently rises above 100°, the heat is not so oppressive as in regions of lower temperature where the percentage of humidity is greater. Western Kansas, however, in summer suffers at times from the effects of hot, sirocco-like winds from the arid regions of the Southwest. The mean annual temperature, which is 58° in the southern part of the State, decreases gradually toward the north, where it is 52°. The rainfall in the eastern part of the State is ample for purposes of agriculture, but it diminishes toward the west.

KANSAS COWBOYS AT THE ROUND-UP OF A CATTLE HERD IN CLARK COUNTY

Clark County, in Southwestern Kansas, lies on the edge of the region formerly represented in geographies as "the Great American Desert." It is crossed by the Cimarron River and its tributaries. Years ago the buffalo disappeared from its prairies and the antelope retreated westward. Great cattle herds came to take their places, ranging freely over the plains, except when assembled, once a year at least, in a grand round-up, a labor in which the cowboys, hardy horsemen though they may be, find their endurance and skill severely tried.

A SOD HOUSE OF THE PRAIRIES

On the treeless plains of Kansas the building of a home was a serious problem to the early settlers owing to a lack of materials. American ingenuity adjusted itself to the task, however, and the Kansas sod house was evolved. It is an architectural cousin to the abode house of the Southwestern territories.

The more widely distributed trees are the oak, elm, black walnut, cottonwood, box-elder, honey-locust, willow, hickory, ash, and hackberry. Owing to the abundance and luxuriance of the sunflowers, which are native to the prairies, Kansas is sometimes called the "Sunflower State." Of the wild animals that formerly roamed the Kansas prairies the buffalo and elk are extinct, but deer and antelope are seen occasionally. The game birds most frequently met with are the prairie-hen, grouse, wild turkey, and wild goose.

Mineral Resources. The principal mineral resources are coal, natural gas, petroleum, zinc lead, and salt. The important coal-bearing region occupies the eastern portion of the State, embracing an area of about 4,000 square miles, but coal of an inferior quality is found also in the western section. Coke is manufactured in small quantities, chiefly by the lead and zinc smelters for their own use. The Joplin-Galena lead and zinc measures extend through the southeastern counties of Kansas. Petroleum is found chiefly in Wilson and Neosho counties, the principal group of wells being in the vicinity of Neodesha, where a large refinery has been erected. Natural gas also is found in several counties. Kansas ranks third among the salt-producing States, the principal salt area extending from the southern boundary northward to the Smoky Hill River in a belt varying from twenty to fifty miles in width. Gypsum and cement also are among the important commercial products.

Agriculture and Manufactures. Kansas is an agricultural State. Practically four-fifths of the land area of the State is in farms and ranches, and about two-thirds of the farming and grazing land is improved. In the western third of the State rainfall usually is deficient, although in occasional years the precipitation is heavy enough to insure the maturity of crops. Stock-raising, however, flourishes in the western counties, and by means of irrigating works many thousand acres have been reclaimed. Kansas has held the honor in some years of being the greatest wheat-producing State in the Union, the crop belt lying chiefly across the central third of the State. Corn, however, is the staple crop of the Kansas farms, and is grown in enormous quantities for shipment and live-stock consumption. Among other important farm products are alfalfa and other hays, sorghum, Kaffir corn, sugar beets, oats, and potatoes. Fruit culture is extensive, some of the largest orchards in the country being within the State. Apples, grapes, peaches, and plums are the chief fruits. A great part of the State's wealth lies in its herds of cattle and swine. Dairying is growing in importance yearly.

STATE AGRICULTURAL COLLEGE, MANHATTAN

With a record of more than forty years of activity the Agricultural College of Kansas ranks among the best known and most useful schools of its class. The vine-covered walls of the college buildings stand a little way outside of Manhattan, the business center of a large farming region. From the college grounds can be obtained a splendid view of the Kansas Valley, one of the most fertile regions of the West.

The distinctively agricultural character of the predominant interests of Kansas determines the nature of the manufacturing enterprises of the State. Out of the total value of the manufactured products of Kansas over one-half is contributed by industries engaged in the preparation of farm products for the market, namely, meat-packing, dairying, flouring and grist milling, and soap and candle making. Slaughtering and meat-packing is the leading industry of the State, as judged by the value of its finished products. The manufacture of grist and flouring mill products ranks second. Railway-car construction and general shop work stand third among the industries, while the smelting and refining of zinc ores comes next.

Chief Cities. Kansas City, the commercial metropolis of the State, is situated at the confluence of the Missouri and Kansas rivers, contiguous to Kansas City, Missouri. The principal industry is slaughtering and meat-packing, the city containing the largest meat-packing establishment in the world. The first bridge across the Missouri River was built here. Topeka,

SCENE IN THE STREETS OF ATCHISON

The busy city of Atchison, one of the leading trade and manufacturing centers of Kansas, is located on the Missouri River, a position that gives it exceptional commercial facilities. With these advantages the discovery of coal in the vicinity was hailed with delight, being deemed a harbinger of even greater development. The first wagon load of coal that was produced was sold at auction on the city streets, the unwonted scene attracting a large crowd.

ST. JACOB'S WELL, NEAR MEADE

Beneath the semi-arid plains of Western Kansas are vast quantities of water. In a few places the soil has been carried down, forming sink holes, in which the surface of the subterranean reservoir is exposed. St. Jacob's Well, in Clark County, is an instance.

the capital of the State, and the second city in population, is situated in the midst of a rich agricultural section. The city contains large flouring mills, creameries, iron foundries, carriage shops, planing mills, and brick and tile works. Topeka is prominent also as an educational center.

Wichita, the third city of the State in size, is the chief commercial center of Southern Kansas. It is situated in the midst of a fine stock-raising country, for which it is the center of supply and distribution. Leavenworth is situated on the Missouri River, and is an important railway and commercial center, with extensive manufactures of iron, flour, brick, and furniture. Lawrence is a manufacturing town, and the seat of the State University. Atchison, also a manufacturing center, contains large foundries, lumber and flour mills. Hutchinson is the center of the salt industry.

Historical. Coronado and other explorers no doubt entered the territory now included in Kansas, but no settlement was made or permanent trading post established until 1800, when one was located a few miles below the mouth of the Kansas River. In 1819–20 the State was partially explored by Major Long, an officer of the United States army. After 1821, in which year Missouri was admitted into the Union, Kansas became a portion of that great unorganized region west of the Mississippi River to which Congress gave the name of "The Indian Country." As a result of the discovery of gold in the Pacific Coast States, a tide of migration flowed across Kansas and the region became widely and favorably known. By the Kansas-Nebraska Act of 1854, Congress stipulated that the question of the allowance or prohibition of slavery in new States should be left to the decision of the citizens thereof. This was virtually a repeal of the Missouri Compromise, and threw open to slavery a territory as large as the thirteen original States.

Kansas at once became the center of bitter conflicts between the slavery and anti-slavery factions. Immigrants came into the new territory from New England and other Northern States, and from the South. Those from the South brought slaves and declared that slavery as an institution should be authorized by the State constitution; the Northern settlers, on the other hand, insisted that all men on Kansas soil should be free and politically equal. The question was discussed in conventions, became the dominant issue at elections, and was the cause of many sanguinary encounters. Elections within the Territory were repeatedly dominated by armed men, and frauds of the most barefaced character were perpetrated in connection with the exercise of the suffrage. At times conditions of actual warfare existed between the rival political factions of the Territory, which supported their respective pretensions by maintaining rival governments. Congress was appealed to repeatedly, and the troubles in the Territory became famous because used as a basis for anti-slavery agitation in national politics. Agitation among the settlers for a grant of statehood by Congress accentuated the troubles. Various State constitutions were drawn up by the respective factions, but not until the beginning of Southern secession was Congress willing to admit Kansas to the Union. It became a State, finally, in 1861.

VERDIGRIS RIVER, NEAR COFFEYVILLE

Among the streams that cross the fertile grain-growing areas of Southeastern Kansas is the Verdigris River, a tributary of the Arkansas. Along its banks, lined with a scanty forest growth, are many quiet nooks where fishermen resort. Coffeyville lies near the river, and has profited by the use of water-power secured by damming the waters.

GATHERING APPLES IN SEDGWICK COUNTY

NEBRASKA

NEBRASKA, one of the Northern States of the Mississippi Basin, has an area of 77,510 square miles, including 670 square miles of water surface. The foreign-born element of the inhabitants, which consists chiefly of Germans, Swedes, Austrian Slavs, British, Danes, and Irish, in the order named, embraces one-sixth of the aggregate number. The colored population is small.

Surface Features. Physically the State consists in general of an undulating plain sloping gradually from the west to the east, the lowest point being at Rulo in Richardson County in the extreme southeastern corner of the State, where the elevation is 842 feet above sea-level. Along the western boundary the elevation averages about 4,000 feet. Properly speaking, there are no mountains in Nebraska, although in the northern and western parts of the State there are lines of lofty hills, where the general level rises, approaching the regions of the Rocky Mountains and the Black Hills. The highest points are in the western counties, culminating in Scotts Bluff (6,000 feet), a little south of where the North Platte River enters the State. The upland slopes are generally gradual and rarely precipitous, although generally diversified by canyons with perpendicular sides. About one-fourth of the area of the State is comprised in the river valleys, which usually are terraced, the land rising by broad successive steps that at some points merge imperceptibly into one another. Along the Missouri River, which forms the eastern boundary of the State, the country is broken and rolling, and in the west, bordering the Niobrara, are deep canyons. The configuration of surface characteristic of the Bad Lands of South Dakota is extended in a modified form into Northern Nebraska. Here it distinguishes a very large area north of the Niobrara River.

THE CAPITOL AT LINCOLN

When the newly created State of Nebraska sought a place for a permanent State capital, the commission having the matter in charge decided upon the village of Lancaster, situated near the State salt springs and in the center of the populated belt. It was renamed Lincoln in honor of the War President, and in 1868 the State government was removed from Omaha to the new location. A portion of the Capitol was ready for occupation in the same year, but completion came long afterwards.

Hydrography. Nebraska has many rivers fed by numerous tributaries, the Missouri River being the most important. This great river, really the main stream of the Mississippi system, borders the State for more than 500 miles of its course, and affords unobstructed navigation for a distance of 2,000 miles above Omaha. Next in size is the Platte or Nebraska, formed by the junction of the North Platte and South Platte rivers; its length, including that of the northern or longer branch, is about 1,250 miles. The first large tributary received by the Platte River is the Loup River, having its main source in a small group of lakes in the Niobrara sand-hill region. Next in size is the Elkhorn River, which, rising in the northern central part of Nebraska, flows into the Platte River about seven miles from Ashland. Near the southern boundary of Nebraska is the Republican River, which alone has more than 400 tributary streams, of whose total length 216 miles are in Nebraska. The Niobrara River, a shallow and rapid stream in the northern part of the State, rises in Wyoming and flows for 263 miles within the limits of Nebraska, finally emptying into the Missouri River at Niobrara. The most important of its tributaries are the Keya Paha and Verdigris rivers.

The streams of the State are, as a rule, shallow and changeable in volume. Especially is this true in the sandy and dry western counties where brief flood conditions often exist, but where the surface waters tend to sink into the soil and form a subterranean flow which is becoming yearly more and more used for irrigating purposes. Water-power is of very little value in the State, despite a fair amount of fall at points on some of the streams. River navigation, because of the changing volume of water, is hardly possible for any considerable part of the year except on the Missouri River along the border of the State. The lakes of Nebraska are small and unimportant.

Climate, Flora, and Fauna. The climate of Nebraska is healthful, invigorating, and in the autumn months especially attractive. In Eastern Nebraska

FALLS OF THE FRENCHMAN RIVER, WAUNETA

The Frenchman River rises in Colorado, and crossing the State line into Chase County, Nebraska, becomes a perennial stream. Drawing constant supply from the water-bearing gravels that outcrop on its banks, it attains an even flow that makes it a valued source of irrigation waters aiding in the development of a large district. At Wauneta, where the river passes between high banks, it has a slight fall that furnishes water-power for a milling plant.

THE STOCK-YARDS OF SOUTH OMAHA

The site of South Omaha was a group of cornfields in 1884, when the stock-yards first were started there. The subsequent growth of the packing-house interests has created on the spot a thriving city that is recognized as one of the leading live-stock markets of the world. The situation of South Omaha in the midst of the great grain-growing area lying west of the Mississippi River seems destined to confer upon it such prosperity as must come from an enormous development of these industries.

the mean temperature for the summer months is 73°, and for the winter months 20°. The mean annual temperature in the northern half of the State is 52° and in the southern 55°. The dryness of the atmosphere, however, has a moderating influence, so that the effects of extreme heat and cold are not felt intensely. The rainfall diminishes from east to west.

In its flora Nebraska comprises species characteristic both of the drier regions in the West and of the moister areas in the East. Of the plants indigenous to the State more than 2,000 species have been collected. Grasses are the leading form of vegetation. Forest trees in the State are of free natural growth only on the bluffs and along the rivers, but many species are found, among which are the cottonwood, elm, ash, black walnut, and willow. There are any number of groves and small forests of planted timber in the State, for on these prairies, though originally treeless, all sylvan growth has been abundant wherever the hand of man has aided it. Wild fruits, as plums, grapes, and berries, are found everywhere along the streams Tree planting has been encouraged in Nebraska by the State government and by popular agitation. Nebraska was once a favored haunt of the bison, elk, deer, antelope, beaver, wolf, lynx, and fox, but most of these animals have been exterminated even in the western part of the State. Smaller wild animals, such as the squirrel, hare, prairie-dog, and others common to the central west, still exist.

BUILDING AN IRRIGATION DITCH NEAR OGALALLA

The South Platte River crosses Keith County from west to east with a broad valley whose topography lends itself readily to the needs of irrigation. Many miles of ditches have been constructed, and extensions of the system are made posisble from year to year. The building of a ditch for irrigation purposes is a work of some magnitude, requiring considerable outlay of capital, but results amply justify the effort.

Agricultural Industries. Nebraska is essentially an agricultural State. The eastern and central parts have the greatest fertility of soil, but in the western part of the State, owing to the scantiness of the rainfall, successful farming is largely dependent upon artificial irrigation. East of the meridian of 100° W. the rainfall is usually sufficient for the successful cultivation of all crops. Nearly nine-tenths of the irrigated area lies within the basin of the Platte River, notably in the counties that are drained by the northern branch of that stream. Among other streams, the waters of which are used to some extent for irrigation purposes, are included the Republican, Niobrara, and White rivers.

The principal crops of Nebraska are the cereals. The commonwealth has attained fourth rank among the States of the Union in the production of corn and oats, and it is one of the chief wheat-growing States. Rye and barley also are grown. Next to cereals the forage crops are to be noted. Alfalfa, which seems especially adapted to dry climates, is grown all over the State and is used for stock feeding. Sorghum also is grown for feed purposes. In certain districts the culture of sugar-beets has become established, and the growing of potatoes for shipment to the markets of the Middle West is attaining gradually increasing favor.

Grazing and Forestry. The raising of cattle and hogs is a typical form of Nebraska industry. Horses are bred to some extent. The raising of cattle is a natural result of the physical conditions that prevail over a great part of the State. Wide areas with insufficient facilities for crop-growing are yet able to sustain grazing herds. In the western counties non-irrigable districts are much used as cattle ranges. With the growing diversity in the forms of farm work, dairying also is taking an important place and seems destined to unlimited development.

Nebraska, being without natural forest growth of any great extent, has no commercial lumbering. The subject of forestry is allied rather to that of agriculture, and takes the form of tree-planting for

SCENE ON A CATTLE RANGE IN NEBRASKA

The importance of cattle raising as one of the leading industries of Nebraska can hardly be overestimated. A considerable portion of the State yet remains unoccupied for purposes of tillage, and within this uncultivated area are many cattle ranges. In the sand-hills region of the northern and western parts it has been found that grazing can be conducted with success upon lands that are valueless for agriculture, the natural grasses cured by the dry autumn winds being sufficient to maintain the herds through the winters with very little additional feed.

the purpose of conserving in the streams and soil the moisture needed for the annual crops. Orcharding is becoming of interest in the eastern counties. Apples, cherries, peaches, plums, and pears are grown.

Mines and Manufactures. The mineral resources of the State are not extensive. Clay for brick and tile making is the most important product, and a good quality of limestone is quarried for building purposes. Cass County has valuable quarries of building stone and deposits of potter's clay. Cherry County also has good stone for construction work. In the western counties beds of pumice stone are found. In the southeastern part of the State there is a projection from the Iowa and Missouri coal-fields; and, although the coal is in thin seams, small amounts are taken out for local consumption.

SCENE ON THE ELKHORN, NEAR WISNER

The Elkhorn River flows from Rock County southeasterly, emptying its waters finally into the lower course of the Platte. It is not a large stream, and the season of low water makes the river bed an expanse of sand banks and muddy shoals. Despite its inconstant volume, however, the Elkhorn is an important factor in the prosperity of the Eastern Nebraska farming country.

Naturally the leading manufacturing industries are those connected with farm products. Slaughtering with meat-packing takes the lead, the product equaling in annual value one-half that of all manufactures. South Omaha is the chief meat-packing center. The manufacture of malt liquors and of flouring and grist mill product are next in importance. The making of cheese, butter, and condensed milk has been showing remarkable advances of late. Creameries are springing up throughout the sections devoted to dairying, producing butter and cheese for distant markets as well as for local use. At Lincoln is one of the largest creameries in the world, drawing its supplies from as far away as Kansas and Colorado. Beet-sugar making employs several large plants in Nebraska. The saddlery industry and the manufacture of farming implements and minor farm supplies flourish in many of the towns. Immense smelting and ore refining works are located at Omaha.

HILLS IN THE VICINITY OF CRAWFORD, IN NORTHWESTERN NEBRASKA

In those counties of Northwestern Nebraska that lie near the border of South Dakota the rolling prairies merge into rough hills which rise to considerable heights above the surrounding country, sometimes forming buttes that are landmarks of the region. Northward from Crawford is a stretch of such hilly country, an extension of the Bad Lands of South Dakota, while to the southward rises the high land of the watershed between the White and Niobrara rivers. The many-colored clays and shales of these hills give a brilliant aspect to the landscape.

Chief Cities. Omaha, situated on a plateau eighty feet above the Missouri River, is the chief commercial city of Nebraska, and from its situation has become one of the important business centers of the United States. Lincoln, the capital, is surrounded by a rich agricultural region and carries on a large traffic in groceries, fruit, coal, and lumber; here are also the largest educational institutions of Nebraska, including the State University. South Omaha, a distinct municipality, is practically a suburb of Omaha, most of its business interests being directed and controlled from the metropolis. The city is one of the largest stock markets in the United States.

Beatrice, a county-seat, is an important manufacturing center. Nebraska City, also a county-seat, is situated on the Missouri River, and is the possessor of many mills and shops. Fremont is situated on the Platte River fifty miles west of the capital; the manufacture of binder twine, saddles, harnesses, and brick, form the principal industrial occupations of the people. Hastings, an important railway junction, is surrounded by a rich agricultural country and is an important cattle and shipping market.

Historical. In 1541 the Spanish explorer Coronado entered the country now included in Nebraska, and applied the name Quivira to a district lying near the fortieth parallel of north latitude and abounding in bison. The middle of the 18th Century French missionaries came from Canada to the Missouri Valley and were followed a little later by traders. Nebraska was embraced within the limits of the colony of Louisiana and came under the sovereignty of the United States through the French cession of 1803. In 1847 the first permanent white settlement was established at Bellevue on the Missouri River, about nine miles south of Omaha, at which point Colonel Sarpy, a Frenchman, located a trading-post. The discovery of gold in California created a rush overland, which led to the establishment of supply posts for emigrants at Bellevue, Plattsmouth, Nebraska City, and Fort Kearney.

TWIN SISTERS BUTTE, BANNER COUNTY

Beside an immense butte situated about seven miles from the North Platte River, is the curiously sculptured rock known as the Twin Sisters. It suggests the forms of two women gazing across the plain from the edge of the towering height on which they stand. Geologists explain prosaically that the Sisters are formed by the weathering of soft rocks.

The Territory of Nebraska as formed by an Act of Congress in 1854, extended from the Missouri River to the crest of the Rocky Mountains. In 1861 and later, the area was reduced. During the first five years after the organization of the Territory of Nebraska, settlements rapidly increased along the Missouri River. Great numbers of adventurers who rushed to the Far West when the gold excitement was at its height, returned and located upon farms in Nebraska. This had the effect of increasing settlements in the interior. The Territory became a State in 1867.

SOUTH DAKOTA

SOUTH DAKOTA, one of the Western Central States, has an area of 77,650 square miles, including 800 square miles of water surface. The population of the State is very largely rural, but is changing through the growth of mining towns in the western part and commercial centers in the east. The foreign-born element composes more than one-fifth of the whole. The Indian population is large, owing to the great reservations of the Sioux tribes, which occupy a considerable area of the State. These people, formerly the fiercest of the Western fighting nations, are slowly adopting civilization, but many individuals yet retain their ancient barbarism.

General Features. On a basis of physical configuration, South Dakota may be separated into four general divisions: First, the Black Hills, situated on the western border and rising as a mountainous, much-eroded group of elevations; second, the table-lands, known as the Plateau du Coteau du Missouri, embracing most of the territory west of the Missouri River, together with segregated areas east of that stream; third, the great river valleys, including both the high terraces and the flood plains, of which the valleys of the Missouri, Cheyenne, White, and James rivers may be cited as examples; and, fourth, the Bad Lands, of which a portion lies between the Cheyenne and White rivers in the southwest, and another part between the Owl (Moreau) and Grand rivers in the northwest.

THE STATE BUILDING AT PIERRE

In 1889, on the admission of the State into the Union, the seat of government was fixed at Pierre, which was the principal Missouri River town among those situated near the center of the commonwealth. Frequent efforts have been made since then for the removal of the capital to another point, but they have failed. No permanent State house has been erected, however, and public business is still carried on in a frame structure, of no architectural pretension, that was erected years ago.

The Black Hills, which lie chiefly within South Dakota, but also extend into Wyoming, occupy an area of about 5,000 square miles. Near the center of the area is Harney Peak (7,216 feet), the greatest altitude in the State. The central heights of the Hills form the main divide for the waters of this region. The limestone formation of the Black Hills contains many caverns, some of which are famous for their beauty. The Wind Cave, near Hot Springs, is an attraction for tourists.

River Valleys. The whole eastern part of the State forms a somewhat undulating plain, notable for its fertility and for its adaptability to agriculture. In the extreme northeast is a lake district containing Big Stone Lake and Lake Traverse, whose waters form part of the eastern boundary of the commonwealth. Numerous rivers exist in the prairie country, and these, although not large, are usually well filled streams. The gentleness of the general slope eastward precludes the existence of waterfalls, except in the extreme eastern counties, where there are some that possess commercial value. A great artesian water belt underlies much of the eastern half of the State, supplementing the water resources of the surface streams.

The most important river of South Dakota is the Missouri, which crosses the State from north to south through a valley which is generally only a few miles in width, though very fertile. Including its many curves and turns, the length of the river in the State is about 350

A MISSOURI RIVER STEAMER MAKING A LANDING AT THE WHARF AT PIERRE

The Missouri River crosses the great plains of the Dakotas as a wide stream, its waters turbid with the fine particles of soil that are being carried toward the sea. Along the course of the river the scenery is monotonously the same. Undulating prairie land extends away from the water to the horizon, or, rising in some great swell close at hand, shuts off the distant view altogether. Here and there the river has cut deeply into hillsides, forming the soil into great bluffs which slope with treacherous abruptness to the swirling current below. Nowhere, however, are there rock masses to break the monotony. Steamers, built with flat bottoms and propelling wheels raised high in air, so as to use the shallowest waters, ply up and down the stream.

miles, and it is navigable throughout. Its western tributaries are the Grand and Owl, the two forks of the Cheyenne, and the White River. All of these western rivers have narrow valleys. Of the eastern tributaries of the Missouri, the James River is the most important. Rising in North Dakota, it unites with the Missouri below Yankton. The only other eastern rivers are the Vermilion and the Big Sioux. It may be said of all the rivers of the State except the Missouri that their tortuous course and changing volume render them of but slight value for navigation and they are almost unused.

The Plateau Region. From the lower levels of the eastern prairies the country ascends toward the west in a series of terraces and undulating plains. This vast expanse is practically treeless, the only wooded portions being along the beds of watercourses, where an occasional clump or fringe of trees occurs The soil is not well watered. In the dryer portion of the year the rivers dwindle to mere creeks, while the lesser streams are transformed into successions of ponds or disappear altogether. As a rule the soil is of good quality notwithstanding the presence of scattered districts that are sandy and unproductive in character.

PLACER MINING IN THE BLACK HILLS

In secluded valleys of the Black Hills the placer miner is still to be seen washing grains of precious metal from the sands in the primitive way used by the first gold-seekers who sought the Hills. Very often the work is aided by streams of water brought to the scene of the gold-washing from some distant creek by means of flumes.

ROCK WALLS AT SYLVAN LAKE, NEAR CUSTER

A beautiful gem of mountain scenery is Sylvan Lake, which lies near the famous Harney Peak, in the Black Hills. On its western and southern shores forests mantle the hillsides that enclose the lake like an amphitheater, but on the eastern side are almost sheer walls of granite, towering scores of feet above the lake's surface.

The Bad Lands are barren areas in the western part of the State. The most notable of these are located between the White and Cheyenne rivers, southeast of the Black Hills, the surface being almost entirely destitute of vegetation. The approach to the Bad Lands is over an ascending slope of rolling, grassy prairie until the crest of a ridge is reached. Here the traveler looks upon a labyrinth of winding ravines and narrow ridges that in some places expand into broad buttes capped with strata harder than the underlying soil, or elsewhere are topped with pinnacles resembling cathedral spires, while in places the denser strata form projections that stand out like cornices and buttresses around the large buttes. The cause of these remarkable phenomena is traceable to the rapidity of the erosion due to the clay-like character of the formations and the frequent change of drainage.

BIRD'S-EYE VIEW OF DEADWOOD

Deadwood, lying in the trough of a forked mountain valley, enclosed by somber, forest-clad hills, is one of the world-known mining towns of America. In its earlier days it achieved fame as a lawless mining camp, infested with desperadoes. That interesting stage of evolution passed away, however, and the city of to-day is properly distinguished as a sober and enterprising business community.

GRANITE NEEDLES NEAR HARNEY PEAK

The central area of the Black Hills is crossed by rocky ridges and mountain groups, among which lie small valleys and canyons of great depth. It is a region of crystalline schist and granite formations of a picturesque and striking character. Among these are the granite needles which are grouped in great clusters on some of the elevated heights near Harney Peak.

Climate, Flora, and Fauna. The climate of South Dakota is dry, healthful, and bracing. The chinook winds from the west have an appreciable influence in modifying the temperature. The winters are long and severe, the very low temperature being rendered endurable by the singular dryness of the atmosphere. The summers on the whole are mild and pleasant, but are interspersed with considerable periods of very warm weather. The range of temperature is from 107° to –40°, while the mean annual temperature is 46°.

The flora of South Dakota is not unlike that of Minnesota or Western Iowa. The Black Hills are covered with timber, largely pine and spruce, while on the plains the banks of the streams are fringed in

places with ash, elm, cottonwood, and other trees. All over the great open plains the earlier settlers found wild grasses growing luxuriantly, and where settlement has not been the means of introducing new vegetation this condition still prevails. These grasses afford nutritious forage for the herds that are allowed to roam upon the open ranges. Antelopes and bears are occasionally found in the western counties. The smaller animals are numerous, and birds of almost all varieties are abundant in their proper seasons.

Farms and Forests. South Dakota is essentially an agricultural State. The section east of the Missouri River, with the exception of a few isolated areas, is exceedingly productive and easily cultivated. Two-thirds of the population are engaged in husbandry. The principal crops are wheat and corn, while other farm products include hay, oats, barley, rye, and potatoes The State is one of the four leading commonwealths of the Union in the production of wheat, the Dakota product being known favorably in the world's markets. The growing of corn is extending with the spread of settlement toward the dryer regions of the central parts of the State. Fruit culture now is in course of development; apple orchards are in successful operation and plums are marketed from Missouri River counties. The raising of live stock, especially of hogs, cattle, and sheep, forms an important branch of farming. The open country lying west of the Missouri River has been a free cattle range since the beginning of settlement and has given cattlemen exceptional advantages for competing in the great markets. Within the past decade the raising of corn-fed cattle for the market also has become a notable industry in this State. In the Black Hills there are no large areas suited to agriculture, but strips of farming land border many of the streams. A large part of the Black Hills is covered with forest. The only tree that is commercially important is the yellow pine, which grows at all altitudes. Other trees are spruce, burr oak, red cedar, boxelder, and elm.

THE FALLS OF THE BIG SIOUX RIVER

Rising in the plains near Watertown, the Big Sioux River winds sluggishly through level country until, in the lower part of its course, it passes between steep banks and from time to time breaks its even current with rapids and cataracts. The most notable of these picturesque bits of river scenery is at the city of Sioux Falls, where the stream makes a fall of fifty-six feet within a short distance and creates a valuable water-power.

Mines and Manufactures. The mineral resources of South Dakota comprise gold, silver, copper, lead, iron, manganese, tin, nickel, graphite, mica, granite, gypsum, cement, clay, and lignite. The metallic deposits are chiefly found in the Black Hills, where the coal-beds of the State also are found. Gold is the principal item in the mineral output, its importance being such as to give South Dakota third place among the gold-producing States. The most profitable quartz mines are in the northern part of the Black Hills, but producing properties exist in other sections of the Hills, and placer mining is still carried on in many of the valleys. Silver is extracted from quartz ores, and the State yields considerable quantities of lead and copper. Tin ore exists in two districts, one located near Harney Peak and the other on the Wyoming line. Obstacles have prevented the thorough testing of the value of the tin deposits, and their development must be considered as yet in the experimental stage.

The industrial interests of South Dakota are centered chiefly in agriculture and mining, the various branches of manufacturing being confined here, as in North Dakota, almost exclusively to supplying the demands of neighborhood markets. The flouring and grist mill industry is the leading branch of manufacturing. Next in rank stands the manufacture of cheese butter, and condensed milk.

Chief Cities. The commercial metropolis of the State is Sioux Falls. The city is situated on the bend of the Big Sioux River; its varied business interests are represented by flouring, woolen, and linen mills, machine-shops, and other establishments. Lead is the second city of the State in size, and is the center of the gold mining and reducing industries. Surrounding it are good agricultural and grazing lands. Deadwood is in the Black Hills region. Rich mines of gold, silver, and lead are in the immediate vicinity, and the city is the financial center and distributing point of a prosperous region. It has several large smelteries, and other manufacturing establishments. Pierre, the State capital, is on the eastern bank of the Missouri River at about the geographical center of the State. It is the largest live-stock market in South Dakota. Yankton, on the Missouri River, is situated in the midst of rich corn and live-stock sections. It has cement factories, brick-kilns, breweries, roller-mills, and other industrial establishments. Aberdeen is the chief wheat, flax, barley, and potato market in South Dakota. Vermilion is the seat of the State University. Among other important towns are included Mitchell, Watertown, Huron, Madison, Brookings, Canton, and Rapid City.

SAM'S RANCH, ON THE EDGE OF THE BAD LANDS

The unpeopled expanse of the Great Plains yields slowly to the invasion of civilized life, but the conquest is certain. First comes the ranchman into the treeless wastes, breaking the prairie's monotony by the unlovely sheds and fences which confine his cattle. Then follows the farmer, with plow and hoe, to cultivate the land. Already the tide of settlement in South Dakota has reached to the edge of the Bad Lands, where Sam's Ranch is one advance-post of civilization.

Historical. South Dakota is included within the limits of the Louisiana Purchase. The first account of the region of which the State forms a part was given by Lewis and Clark, who were sent out by the National Government to examine the country in 1804–06 Other explorations were made from time to time, and in 1856 settlement began at Sioux Falls. The settlement of South Dakota, like that of its northern neighbor, was accomplished only in the face of a determined opposition from many of the Indian tribes, who again and again rose in open warfare. In the great Sioux War of 1862 the frontiers were ravaged for hundreds of miles. The last serious Indian outbreak occurred in the winter of 1890–91, when the Indians in the Pine Ridge Reservation met United States troops in battle at Wounded Knee, their defeat marking the close of three centuries' warfare between red men and white men. In 1861 Dakota Territory was constituted, and in 1889 was divided into the States of North Dakota and South Dakota.

NORTH DAKOTA

NORTH DAKOTA, one of the Western Central States, has an area of 70,795 square miles, of which 600 square miles are water surface. The population is more generally rural in character than that of any other Western State, 94 per cent of the people living on farms. The foreign-born element constitutes 35 per cent of the whole population, a fact which shows that immigration from the Old World has been a very important factor in the settlement of the State. The Indians of North Dakota are chiefly of the Sioux stock, and are still dependent upon Government rations for subsistence, although the larger number are industrious. Only a small percentage can speak English.

Physiography. The prominent distinguishing natural divisions of North Dakota are the valley of the Red River, the highlands of the Pembina and Turtle mountains, the central area of rolling prairie, and the Plateau du Coteau du Missouri. The Red River Valley comprises a tract of land from twenty-five to seventy miles in width, extending north and south entirely across the State. Physically it forms an almost level plain. Near the international boundary the limit of the valley is reached at the base of the Pembina Mountains. The region of these mountains lies north of the Pembina River, the southern extremity reaching into Cavalier County. On the eastern escarpment of the range the elevation above sea-level is from 1,100 feet at the south to 1,550 feet at the north. On the north the Pembina Mountains extend far into Manitoba. West of the Pembina Mountains the general elevation increases until the Turtle Mountains are reached. These mountains form an oval plateau about forty miles in length, fully two-thirds of which lies within North Dakota. The loftiest elevations of this plateau, Butte St. Paul and Bear Butte, rise to heights of 700 and 600 feet above the level of the plateau itself. The United States Boundary Commission gives the highest point of the Turtle Mountains as 2,534 feet above sea-level. Between the central prairie region and the Missouri River lies the Plateau du Coteau du Missouri, that is, the hilly upland plain of the Missouri, a grassy region, marked in many places by stony morainic ridges, and in others, especially in the western part, by large hills, apparently remnants of old plateaus.

THE CAPITOL AT BISMARCK

Bismarck superseded Yankton as territorial capital, being selected because of its convenient situation upon the great waterway of the State, the Missouri River, and upon the main route westward from the Red River Valley. The removal of Government offices began in 1883, but was prolonged by legal contests over the location of the new capital. The tastefully built Capitol, begun by Bismarck citizens and accepted in an unfinished condition by the new State of North Dakota in 1889, was finally completed in 1894.

Rivers. The principal stream is the Missouri River, which has a course, navigable throughout, of more than 200 miles in North Dakota. Its western tributaries are the Little Missouri, Knife, Heart, and Cannon Ball rivers. The eastern tributaries are, as a rule, short and rapid streams, flowing down the slopes of the Missouri Coteau. The James River, which flows for about 150 miles through a wide, fertile valley, east of the Coteau, is one of the most notable. The Missouri and its affluents form a part of the great Mississippi drainage system, while the other streams of the State belong to the northern system of rivers, all draining finally into Hudson Bay. These are the Red River and its tributaries, whose waters all flow into Lake Winnipeg, and thence into Hudson Bay. The Red River is navigable for steamboats southward from Lake Winnipeg for several hundred miles, and for smaller craft much higher. Another important river of the State is the Souris or Mouse River, which, rising in Canada, crosses the international boundary, describes a large curve in the prairie region of the State, and recrosses the Canadian line. It is narrow throughout, and in its upward course is deep and rapid.

Climate, Flora, and Fauna. The climate of the State is dry and healthful, with very cold winters and warm summers. Winter begins early in November, with light snowfalls, and continues to the end of March. In grazing sections animals live on the ranges throughout the cold season. The springs are short and the summers long, with warm, sunshiny days and cool nights. Temperatures for the year range between 105° and –44°. The annual rainfall usually is not heavy, and in the western part of the State is insufficient in some years for the maturing of crops.

REAPING A GREAT WHEAT FIELD IN THE BONANZA FARM REGION OF NORTH DAKOTA

The soil of North Dakota is a rich alluvial loam, ranging in depth from six inches to three feet, with a clay subsoil that retains the natural moisture. These conditions create the wonderful productivity that has given the Dakota wheat country world-wide fame. On the great "bonanza farms" of the eastern counties may be seen wheat culture conducted on a gigantic scale. Grain fields often are miles in extent, and in harvest time, with the long line of reapers sweeping across a yellow sea of billowy grain, they present a scene that fills the mind of the on-looker with amazement and admiration.

THE MISSOURI RIVER AT BISMARCK

Fifty feet above the turbid waters of the Missouri River, where it flows past the city of Bismarck, a steel bridge, built for one of the great railroad lines, stretches from shore to shore, marking with its ponderous spans the transit of commerce between the East and the West.

The wooded area of North Dakota is situated in the Turtle Mountains and in some parts of the Red River Valley. The trees are varieties that are common to Minnesota and Wisconsin — the pine, spruce, oak, elm, beech, and cottonwood, with some maple. The greater part of the State is a treeless prairie, bearing, where uncultivated, various nutritive grasses.

The larger wild animals have almost entirely disappeared, but small game of many kinds is abundant. The lakes in season are frequented by countless numbers of aquatic birds, while the prairies and uplands that are remote from settlements abound in all of the game-birds common to the Middle West.

NORTHWARD VIEW ON BROADWAY, FARGO

Fargo, a progressive industrial city, and the largest center of population in North Dakota, by reason of its fortunate location, is one of the most important distributing points among the newer of the northern States of the Mississippi Basin. In 1893 its older wooden buildings were swept away by a devastating fire, their places to-day being filled by long lines of substantial stores and shops, which are nowhere better seen than on Broadway.

Agricultural Industries. Agriculture and stock-raising are the leading industries of North Dakota. Of the products of the soil wheat is by far the most important, the "No. 1 hard" grade having a world-wide reputation for its superior qualities. Immense farms, in some instances containing as many as 30,000 or 40,000 acres, are to be found in the valley of the Red River. Each of these is operated under a highly developed system, and in the summer often employs from 200 to 300 men. North Dakota ranks third among the wheat-producing States. Hay is also a leading product, while barley, oats, corn, flax, and potatoes are grown in large quantities. The soil throughout the State, except in the Bad Lands, is unusually fertile. The cultivation of orchard fruits is confined almost entirely to the eastern half of the State, where plum, prune, and apple trees are grown.

Grazing Industry. The prairies in the eastern half of the State are unequaled for grazing. The native grasses of the plains are extolled as constituting the finest food for cattle, sheep, and horses. Bunch-grass and blue-joint and buffalo grasses are the more noted varieties found on the prairies. These cure standing, and afford sustenance to cattle that are allowed to remain on the ranges throughout the winter. Large areas of wild salt and prairie grasses are annually cut over for hay and the supply is stored as winter forage. Of the tame grasses, the ranchmen have had great success with brome grass and alfalfa, these proving particularly nutritious and well adapted for market-bred cattle. These grasses form an important factor in the system of crop rotation practiced in North Dakota, alternating with cereals to rest the soil. The cattle now found in the State are mostly in the comparatively small herds, owned by the resident farmers and ranchmen. In the earlier years of settlement immense areas were occupied by great herds that pastured on the open ranges, but the influx of farming population has restricted the extent of country open to free pasturage.

Coincident with the development of the State's farming areas there has been a growing demand for draft animals, and to this may be traced the gradual growth of an interest in horse-raising as a branch of the ranching interest. However, there has always been some degree of effort in this direction with a view to securing hardy breeds for the use of herdsmen. The raising of sheep is carried on to a limited extent in the western counties. Hogs are raised in increasing numbers by the small farmers. As an adjunct of North Dakota agriculture, dairying is making great strides. The dairy butter exported to the markets of the country is favorably known, while creameries and cheese factories conducted on approved scientific lines are increasing.

THE JAMES RIVER, NEAR JAMESTOWN

The James River is a small stream, but important because of the large area which it drains. Rising in the central hills, it traverses a broad, flat valley, receiving minor streams from either side. On the west its basin impinges upon the eastern slopes of the Missouri Plateau, while on the east a hardly perceptible rise in the rolling prairie marks the watershed between it and the Sheyenne Valley. Along the course of the river are many charming bits of quiet scenery.

Mines and Manufactures. Large areas in the western half of the State, especially west of the Missouri River, are underlaid with deposits of lignite, the heating power of which is sufficient to create a demand for it as home fuel. It is largely mined, therefore, for local use. The distribution of clays suitable for the manufacture of common brick and

other products is extensive throughout the State. Fire-clay of excellent quality exists near Dickinson, and clays suited to the manufacture of stoneware and earthenware are found in Stark County. There are numerous salt springs throughout the Red River Valley.

ROCK FORMATION OF THE BAD LANDS

One of the most interesting physical features of North Dakota is the so-called "Bad Lands." The tract, comprising an area from ten to twenty miles in width along the Little Missouri River, was originally a level plain, but the river has cut a very deep bed and its tributary streams also have eroded the plain until the surface is so broken with deep gullies and gorges that traveling in vehicles is rendered impossible.

The manufacturing interests of North Dakota, with the exception of that of the flouring and grist mills, are practically confined to the so-called neighborhood industries, supplying only the demands of near-by markets. The principal milling centers are in those districts devoted to wheat growing, and more especially in those of the eastern part of the State. Allied to the milling industry as dependent on the cereal products is the manufacture of crackers, which has been established at Grand Forks. Other industrial enterprises dependent upon the products of the soil for their raw material are the creameries and cheese factories already mentioned, linseed-oil mills, which absorb the output of flaxseed, and broom factories; besides which may be noted a number of packing-houses, some factories for leather goods, and several establishments for handling wool. Among minor industries less intimately connected with the raw products of the State are the candy works, planing mills, bottling works, soap factories, and wire-fence works. In several places there are tile and brick yards which furnish excellent grades of building and drainage material.

Chief Cities. Fargo, on the Red River, is the chief commercial center of the State. It is an important railway junction and the warehouse point for a vast wheat-growing area. Among manufactures the chief are agricultural implements, car-wheels, brick, and paper. Grand Forks, seat of the State University, is the commercial center of the northeastern section of the State. It lies in the heart of the hard-wheat district of the Red River Valley and has numerous elevators and flouring mills, as well as several important lumber mills.

Bismarck, the capital, is a thriving city on the upper Missouri River, with an extensive river trade. Jamestown, a prosperous town ninety-eight miles east of Bismarck, is a railway junction, and is in the center of the James River Valley artesian-well belt. Valley City, situated on the Sheyenne River and Grafton, on the Park River, are flourishing towns with manufacturing interests. Devils Lake is a supply point for an excellent farming region and is an educational center. Cando, the county seat of Towner County, is a progressive town in a fine agricultural district.

Dickinson, on Heart River, ships large numbers of cattle and is the center for a coal-mining and sheep-raising district. Wahpeton, at the head of navigation on the Red River, is the seat of the State Scientific School and a denominational college. Minot, a commercial center for the northwestern part of the State, and a railway junction-point, is the seat of a United States land office; lignite, live stock, and produce are shipped. Mandan, on the west bank of the Missouri, opposite Bismarck, has machine shops, elevators, and flouring mills; near by are coal mines.

Hillsboro, a county seat situated on a tributary of the Red River, is a flour-milling and shipping town of growing importance. Casselton, a railway junction-point and grain-shipping station in the upper part of the Red River Valley; Langdon, a county seat and milling town in the lower part of the Valley; and Lisbon, located on the Sheyenne River and the site of the State Soldiers' Home, are towns that base their prosperity upon the business of the grain-growing areas. Mayville, Larimore, and Park River are flourishing business centers in the "Bonanza farm" region.

Historical. The region included in North Dakota formed a part of the Louisiana Purchase of 1803. It was first explored by Lewis and Clark, who were appointed by Congress to conduct an expedition to the head waters of the Missouri River and to the Pacific Ocean. Early in the spring of 1804 the party began the ascent of the river, and by autumn had gone some distance beyond the parallel of 47° N., which is near the present site of Bismarck. The winter of 1804–'05 was passed in that neighborhood with the Mandan Indians. The first settlement in the State was made by a French trader at Pembina in the extreme northeastern corner. Here also Lord Selkirk in 1812 established a post of the Hudson Bay Company, which was, however, withdrawn in 1823. Dakota Territory was organized in 1861, and included parts of what are now Wyoming and Montana. From it were created the two States of North and South Dakota, which were admitted into the Union by proclamation of President Harrison, November 3, 1889.

THE FORKS OF THE RED RIVER, NEAR GRAND FORKS

Along the eastern border of North Dakota flows the Red River, a quiet stream, moving slowly and peacefully across great prairie stretches. In pioneer days, when new settlers groped their unmapped way along its length, the "great forks," where Lake River joins from the east, was a notable guide-point for travelers. Since then many changes have come about in the region of the pioneers' landmark, and where once the lonely camp-fires were kindled there now shine forth upon the night the many lights of Grand Forks city, named from the river's forks.

MONTANA

MONTANA, one of the northern group of Plateau States, has an area of 146,080 square miles, of which 770 square miles are water surface. It is one of the largest of American commonwealths, having an east-and-west extension of about fifteen degrees of longitude. The dominance of mining industries in its development has given it a population with a tendency toward urban settlement. The foreign-born population of Montana is a little more than one-quarter of the whole.

THE CAPITOL AT HELENA

The capital of Montana was located at Helena in 1874, that city having the advantage over its rival, Virginia City, of being situated on the chief routes of transcontinental traffic and travel. In 1902 was completed the new State Capitol.

General Features. Montana is divided naturally into two sections with distinct physical characteristics, namely, the region of the plains in the east, comprising about three-fifths of the State, and that of the mountains, embracing the remaining western portion. The former section is a monotonous, rolling expanse, varied only by the channels of streams and by a few short and broken ranges, or mere groups of hills. The general level has a gradual slope rising from the eastern boundary to the base of the Rocky Mountains. The main range of the cordillera of the Rocky Mountains extends northwest and southeast through the State.

The general elevation of the Rocky Mountain Range at the crest is not over 6,500 feet, but there are twenty-two mountain peaks with elevations exceeding 10,000 feet, the highest being Mount Douglas (11,300 feet). Many of the summits are covered with snow throughout the year. A small section of Eastern Montana has the wild and barren features characteristic of the Bad Lands of South Dakota.

Hydrography. Montana belongs mainly to the Mississippi Basin, but the section of the State lying west of the main divide, embracing an area of about 25,000 square miles, is tributary to the Columbia River system, and a very small district in Teton County drains into the Hudson Bay system. The chief rivers are the Missouri and Yellowstone. The former crosses the northern part of the State, receiving tributaries from either side. It is navigable in flood time to Great Falls, where a cataract bars further progress. The Yellowstone River, rising in Yellowstone National Park, flows in a general northeasterly direction until it reaches the Missouri River in North Dakota. Its drainage basin has an approximate area of 36,000 square miles. The Yellowstone is navigable in spring and early summer, by steamers, for a distance of over 300 miles from its mouth.

In the extreme northwest is a section drained by the Kootenai River. South of this lies a region tributary to the Missoula River. After receiving the Flathead River, the outlet of Flathead Lake, the Missoula is known as the Clarks Fork of the Columbia River. This stream flows into Idaho and is navigable for small boats some distance into Montana. Flathead Lake, about thirty-five miles long and at its widest part fifteen miles across, forms part of the drainage system of an extensive mountain valley and is navigable by steamers.

Climate, Flora, and Fauna. The winter season, while long, is not continually cold, although at times the thermometer falls lower than 50° below zero. Warm winds from the west modify the severity of the season. The summer is comparatively short and frequently very hot, the temperature at times rising above 100°. Hot days, however, are followed by cool nights. The air is very dry and clear both in summer and winter. The mean annual temperature at various points ranges between 40° and 50°. The rainfall is ample in the elevated western sections of the State, but very inadequate in the plains region that embraces the eastern counties.

CAMPUS OF THE STATE UNIVERSITY AT MISSOULA

At the foot of the mountain slopes that overlook Missoula from the south is the group of buildings occupied by the State University. A two-mile stretch of level ground separates them from the city. The campus proper is a tract of forty acres, a large part of which is graded and handsomely improved. Chief among the campus buildings is University Hall, its central clock-tower a conspicuous feature from every point of view. Near it is the Gymnasium, while within easy distance are the Science Building and Woman's Hall.

The forested area of Montana lies in the region dominated by the Rocky Mountains, but some timber is found along the beds of all the streams. In the southern part the lodge-pole pine predominates, but northward the red fir, yellow pine, white pine, and tamarack are found. The small plants of the State are largely those characteristic of the Western States, except that various alpine plants which are not found elsewhere grow in the mountains. There is a large variety of wild animals in the State. The moose and Rocky Mountain goat, although rare, are still found in secluded haunts; the blacktail or mule deer, antelope, elk, and mountain sheep are met with in

considerable numbers; and the bear, mountain-lion, and other wild creatures abound. The Rocky Mountain region is a country much sought by adventurous sportsmen.

Mines and Manufactures. Montana is well called the "Treasure State" and "Bonanza State," gold, silver, copper, lead, coal, iron, and precious stones being taken in great quantities from its mines. Gold exists in Montana in a greater variety of forms than almost anywhere else. Silver, too, exists not only as native metal but in numerous combinations. The State has a considerable output of lead, and since 1892 Montana has been the leading State in the production of copper. Iron also is found in many parts of the State in ores of great variety The coal of Montana includes the lignite variety, occurring in the eastern section of the State, and the true bituminous coal, found in the Rocky Mountain region. The bituminous coal-beds lie in small isolated fields in the foothills region that extends for miles east of the Rocky Mountains. Garnets were discovered and cut in Montana as early as 1865. The sapphire mines are situated in Fergus County, in the center of the State, the gems being found in a vein of clay inclosed between walls of rock. Limestone, granite, marble, and sandstone are quarried in the State. With the exception of the smelting and refining of ores, the manufacturing interests of Montana are mainly limited to the so-called neighborhood industries, the products being consumed at or near the point of production. The smelting and refining of copper and lead in the value of its products surpasses all other branches of manufacturing. The development of the industry has been facilitated by the abundant water-power furnished by the Missouri River at Great Falls, within easy reach of the copper-mining district. The making of coke from Montana coal is now of great extent. The manufacture of lumber and timber products ranks second among the industries of Montana. Next comes the output of foundries and machine-shops, chiefly mining machinery and castings.

GLACIER-ERODED PEAK, WESTERN MONTANA

The carving action of ancient glaciers is evidenced in many ways in the mountain regions of Western Montana. Extensive valleys have been scoured out by the ice-streams, and isolated peaks rounded into peculiar cone-shaped forms. In the Mission Range and in neighboring groups occur typical examples of the latter. Some small glaciers still exist in this region.

Agriculture and Forests. The lands suitable for cultivation in Montana may be classified as bottom-lands, which usually have a rich, black soil; bench-lands, consisting of a light, sandy loam; and high bluff-lands, which are best adapted for grazing purposes. Wheat, barley, oats, rye, peas, and potatoes are the staple farm products, and immense areas are given up to various forage plants. In the eastern valleys corn is an important crop. Fruit culture is carried on successfully in the more fertile river valleys, apples, pears, plums, cherries, and strawberries being the principal products. The development of irrigation is a necessary basis of the future agricultural possibilities of Montana. The live-stock interests of the State are of great importance. Cattle-raising long has been one of the great features of its industrial evolution. In recent years sheep-raising has forged ahead, so that the State is now the foremost in the Union in wool production. Angora goats also have been introduced with favorable results. In horse-breeding Montana has become widely known. From the ordinary market the United States Government has drawn heavily to maintain its supply of cavalry horses for army service, and from the stock-farms, some of which are among the largest in the country, many well-known prize winners of the race tracks have been taken. Despite the importance of the cattle-raising industry in Montana, the State is not well advanced in the dairying industries. Dairy products from other states supply the needs of the population in this line.

Montana has great forest areas in the Rocky Mountains, in which lumbering is gradually increasing as the growth of towns opens a wider market for the output. The amount of merchantable timber is immense, much of it being too far from transportation routes to be of present commercial value, but development has taken place in Missoula, Ravalli, and Flathead counties.

THE GREAT FALLS OF THE MISSOURI

Just east of the Rockies the Missouri River forms a series of waterfalls and rapids of remarkable beauty and of enormous economic value. The city of Great Falls, located at this point, is within easy reach of most of this valuable water-power.

AN ENCAMPMENT OF CROW INDIANS ON THE PRAIRIE

The famous Crow Nation is a branch of the great Siouan stock. Before the coming of white settlers to Montana the Crows were a warlike and predatory race. Their mounted war-parties swept over wide areas, dominating the vast extent of the Upper Yellowstone basin and forcing neighboring tribes into an almost continuous warfare. Owing to their great numbers of ponies and their custom of using skins dressed to a whitish hue for their tepees, a prairie encampment of the Crows is a peculiarly striking sight.

Chief Cities. Butte is the most important railway and commercial center in the State. The town has been called "the greatest mining-camp in the world." Its chief industries are the mining and smelting of copper, silver, and gold. Great Falls is a busy manufacturing town and an important center for the shipment of wool and live stock. The principal industrial establishments are smelting and refining works, flouring and lumber mills, and foundries and machine-shops. Anaconda is another city with interests that are almost wholly dependent upon the copper-refining industry that has developed here because of the water-power. The immense copper smelting and refining works of Anaconda, covering 300 acres of ground, are the largest in the world.

Helena, the State capital, situated in the center of a rich mining district, is a town of considerable wealth. Missoula is the distributing point for a farming region, a railway division

EAGLE BUTTE AND YELLOWSTONE RIVER, NEAR GLENDIVE

The harsh character of some of the scenery in Eastern Montana is exemplified at Eagle Butte, a rugged elevation situated about ten miles from Glendive. Its precipitous cliffs, bare of vegetation, slope abruptly from castellated heights to the waters of the Yellowstone River, far below. From the upper levels of the rocks may be seen a view of the broken plain that stretches away toward distant hills, and of the river, which finds its way with many windings toward the north.

center, and the seat of the State University. Bozeman is a stock-shipping point and is surrounded by a barley-growing region. Billings is the great wool-shipping town of the State. Kalispell, chief town of the Flathead Valley, is a jobbing and lumbering center. Livingston is the supply point for a mining district and has large railroad shops. Red Lodge is near large coal mines and extensive stock-raising districts. Havre is the center of supply for a region of irrigated farm lands. Miles City is the wool center of Eastern Montana. Glendive is also a shipping point for wool and live stock.

COPPER-SMELTING ESTABLISHMENT IN MONTANA

Among the smaller cities of the State the more notable are Virginia City, the former capital; Basin, a mining town; Benton, headquarters of extensive stock-raising interests; Hamilton, a supply point of the Bitter Root Valley farming country; Big Timber, a wool-shipping town of some importance; and East Helena, which is located near the capital city and has large silver-lead smelters.

Historical. The history of Montana dates back to 1742, when the Sieur de la Vérendrye, with a small party of

McDONALD LAKE AT SUNRISE

Amid the mountains of Mission Range nestles the alpine lake named McDonald. On three sides spurs and peaks, snow-crowned, rise toward the sky in a colossal amphitheater. The lake, which is formed by the damming of waters above an ancient moraine, is fed by small streams which have their sources in the existing glaciers of the higher peaks.

French Canadians, ascended the Missouri River to the base of the Rocky Mountains. The portion of Montana lying east of the main divide of the Rocky Mountains was included in the Louisiana Purchase of 1803, while that on the west formed a section of the Oregon territory that after long controversy came into the undisputed possession of the United States in 1846. The first systematic exploration was made by a party under Captains Lewis and Clark, who were sent out by the Government in 1804. In 1807 a fort was erected at the junction of the Big Horn and Yellowstone rivers, and in 1829 the American Fur Company established Fort Union at the mouth of the Yellowstone River. In 1832 the "Yellowstone" arrived at Fort Union, being the first steamboat to ascend the Missouri River to that point. A half-breed, François Finlay, found traces of gold on a branch of Hell Gate River in 1852 and four boats brought prospectors and miners to Fort Benton in 1862. Later the placer-mines at Bannock were found and a movement of miners toward the new camp commenced, increasing in 1863, when the rich deposits at Alder Gulch were opened.

May 26, 1864, Montana was set off from Idaho and erected into a separate Territory. Virginia City was the first capital of the Territory, but later the seat of government was fixed at Helena. In the spring of 1876 the discovery of gold in the Black Hills was followed by a rush of miners to Montana and a reopening of hostilities with the Sioux and other tribes, an incident of which was the massacre of Custer's cavalry by the Sioux and Cheyennes near the Little Big Horn within the present Rosebud County. The overthrow of the allied tribes opened the country to commerce. Copper mining began about 1880, and the building of a railroad in 1883 joined the Territory to Eastern markets. In 1889 Montana was admitted into the Union as a State. The influx of farming population in recent years has been a significant feature of its growth.

IDAHO

IDAHO lies upon the western slope of the Rocky Mountains. The present limits of the State, established in 1868, inclose an area of 84,800 square miles, of which 510 square miles are water surface. In population it is one of the most rapidly growing States in the Union, immigration being attracted by its well-known resources. About one-seventh of the inhabitants are of foreign birth.

THE CAPITOL AT BOISE

In 1865 the capital of Idaho Territory became located at Boise, through the action of the United States marshal, who removed the archives thence from Lewiston. A legislative act had ordered this re-location of the capital because Boise was a more central site, and the resistance to the act threatened by the opponents of removal was thwarted by prompt action of the marshal. The present Capitol was completed in 1887. It is a commodious brick structure of tasteful design.

Mountains. The surface of Idaho is exceedingly diversified. Broadly speaking, the State is a wedge-shaped plateau, the chief topographical features of which are the drainage systems of the Snake and Columbia rivers, with an extensive arid plain extending along the former stream, an irregular mass of rugged mountains occupying the entire width of the plateau northward from the plain, and a succession of desert ranges extending between the Snake River divide and the Great Basin, which includes a small portion of Southeastern Idaho. The Rocky Mountains and their continuations, the Bitter Root, Cœur d'Alene, and Cabinet ranges, extend along the northeastern border of the State, the crest of these ranges describing the boundary between Idaho and Montana. Within the center of the State are the Clearwater, the lofty and rugged Salmon River, and the Sawtooth ranges; the southeastern portion of the State is crossed by the Snake River, Cariboo, and Bannock ranges, while in the southwest is the Owyhee Range. The surface of Idaho rises from an altitude of 647 feet in the plains region surrounding Lewiston to an elevation of about 10,000 feet in the southeastern part, reaching its culminating point, 12,078 feet, in Hyndman Peak, in Blaine County.

THE TWIN FALLS, ON THE SNAKE RIVER

Across the southern part of Idaho extends the canyon-like valley of the Snake River, cut into the lava crust that overspreads this vast region. Many waterfalls and rapids occur, among them the Twin Falls, counted as one of the scenic beauties of the West. A rocky island which here divides the channel of the river into two streams, on its lower side descends sheer 130 feet, forming part of a lava cliff over which the waters fall to re-unite in the broad basin that lies at the foot of the precipice.

Hydrography. The largest river in the State is the Snake, which has its source in the Yellowstone National Park. It stretches across the entire width of Southern Idaho in a broad curve opening toward the north, and traversing the crescent-shaped district known as the Snake River Plains. With the exception of a small corner in the southeast and a narrow strip in the north, this stream drains the entire State. The Snake forms about one-third of the western boundary of the State, where for about 125 miles, from Weiser to Asotin, it flows through one of the most remarkable canyons in the United States. Its largest tributary on the east is the Salmon River, which, fed in its early course by many streams from the Salmon River Mountains and the Rockies, receives in its northwest course across the State nearly all the drainage of the central counties. Less important branches are the Clearwater and Palouse rivers. On the north the Snake River receives several short and rapid streams, fed by scattered lakes of the lava-covered plains; on the south the Bruneau Salmon Falls, and Blackfoot rivers flow from the various mountain ranges; while on the west, from the mountain country of Oregon, come the Owyhee, Malheur, and other streams. The American, Shoshone, Twin, and Salmon falls, in the Snake River, are points of scenic interest. The waters of the extreme north, or the Panhandle district of Idaho, drain to the Columbia River through the Spokane River, which rises within the State in the Bitter Root Range, and through the Kootenai River and Clark Fork, which enter Idaho from Montana. The State has many mountain lakes, as the Pend d'Oreille, an expansion of the Clark Fork, about thirty-five miles long and eight miles wide; Cœur d'Alene, nearly twenty miles long, and Lower Priest, a large body of water in the heart of the Priest River Forest Reserve.

Climate, Flora, and Fauna. The climate of Idaho varies with the altitude, but throughout the State it is invigorating

and healthful, the atmosphere being extremely dry and highly rarefied. In the mountainous regions of the State the winters are characterized by extreme cold and a heavy snowfall; on the plains they are not more severe than the winters throughout the Central States in the same latitude, while in the valleys the temperature is mild and the snowfall light. The greatest rainfall occurs in the mountainous regions of the north, the precipitation in the lower valleys and on the plains being in general so slight that irrigation is necessary for agriculture.

THE ALPHEUS SPRING, IN BLUE LAKES ALCOVE

Below Shoshone Falls a short canyon, termed the Blue Lakes Alcove, opens into the greater canyon of Snake River. It heads in a semi-circular amphitheater some 300 feet in depth. This chasm receives no stream from the adjacent plains, but torrents from subterranean sources are poured into it by giant springs in the valley bottom, among these being Alpheus Spring.

STATE UNIVERSITY BUILDING, MOSCOW

The State University of Idaho has secured a deserved reputation through the activities of its college of agriculture. Peculiar problems are connected with the development of farming interests in the rainless valleys of Idaho, and in the solution of these problems the University has found a sphere of usefulness which it has occupied with success.

The mountainous regions of the north are heavily covered with coniferous forests, chiefly of white and yellow pine, larch, and subalpine fir. On the Snake River plains the characteristic growth is sagebrush, while the country south and east includes areas of grass, with a scattering growth of conifers and aspens on the mountains. This region was once a favorite haunt of the trapper and hunter, and the mountain-sheep and several species of deer are still abundant, but the moose and mountain goat are now rare. The pronghorn antelope abounds on the plains, and in the unfrequented regions the bear, wolf, and lynx are still found. Game-birds and water-fowl are numerous.

Mines and Manufactures. The leading industries are mining and agriculture, and mining ranks first. Gold and silver are the most valuable minerals. The placer mines of the Idaho Basin have some of the richest placer deposits in the United States. Idaho ranks fourth among the silver-producing States. Lead is a large ingredient of the silver ores, and the famous Cœur d'Alene silver district of Idaho yields about one-fourth of the total amount of lead secured in the United States. Copper exists in various localities, the most valuable deposits being in the Seven Devils district in Washington and Idaho counties. Ledges of cinnabar have been discovered containing a high grade of quicksilver and a profitable proportion of gold. Nickel ore is found in Lemhi County. Extensive lignite deposits are worked for local consumers in Boise, Lemhi, and Frémont counties.

Manufactures are largely limited to the production of articles for local consumption. Of the industrial establishments reported, all are of comparatively recent growth. The principal industry, in which nearly one-third of the wage-earning population is engaged, is the production of lumber and timber products. Next, in the order of importance by value, is the making of flouring and grist-mill products. The large number of falls and rapids in the Snake River offer an abundance of water power which is full of latent possibilities, but thus far the population and transportation facilities of the State have not been sufficient to attract manufacturing investment to any large extent.

AN IDAHO OPAL MINE, NEAR MOSCOW

In 1890 a New York jeweler chanced to examine the rocks thrown out in digging a well near Moscow, Idaho, and detected precious opal. This treasure spot lay across the State line, in Washington, but it was soon found that Idaho was the real opal State, containing promising deposits in several localities. The opal is usually found enclosed in basaltic rock. An opal mine resembles an open quarry, the breaking up of the basaltic stratum revealing the gems.

Forests and Farms. The timber resources of Idaho are of exceptional value, no other State in the Union containing more ample forest belts. The wooded area lies chiefly in the mountainous districts of the northern portion of the State. Pine and fir are the predominant trees, and lumbering has become an industry of importance in the mountain districts near the railroads, finding its markets near home.

In the northern counties of the State tillage of the soil can be carried on under the ordinary conditions of natural moisture, but in the south the vast plains of fertile but unwatered land require irrigation. Several great engineering projects will here be put into effect to aid the State's development. The deep and narrow valley of the Snake River in places lends itself naturally to the creation of artificial reservoirs. From these water could be

THE NATATORIUM, BOISE

Hot springs occur at a number of locations in Idaho, and at Boise the artesian wells produce hot water. One of the notable places in the city is the Natatorium, a bathing establishment in which the baths are supplied with hot water drawn from artesian wells.

conducted to large areas of the arid but fertile country that lies adjacent, and projects are in formation to secure such results. In the Boise Valley agriculture and horticulture have become established, and in some lesser areas of the Snake River Valley as well. Alfalfa and other hay crops, wheat, barley, oats, and potatoes and other vegetables as well as all deciduous fruits are successfully grown. Apples and prunes from Idaho are now widely and favorably known for their general excellence.

Owing to the vast area of excellent grazing-lands in the State, the raising of live stock has been for years a leading industry. The lowlands of the river valleys furnish a good winter range, but the best grazing-lands are found in the foothills of the mountains, where the winters are not often severe and cattle may roam without shelter, following the range up in the mountains in summer. The sheep industry is large, the State standing third in the production of wool.

Chief Cities. Boise is the capital and chief city of the State. It is the shipping center for the fertile Boise Valley. In the vicinity are quartz and placer mines, and Boise is the supply point of the district and seat of a United States assay office. It is a progressive city, well provided with public improvements.

Pocatello, a thriving railway town, is on the Port Neuf River in the Fort Hall Indian Reservation. The larger part of this reservation, which comprises some of the best agricultural lands in the State, is within the boundaries of Bannock County, of which Pocatello is the county seat. The town is surrounded by a beautiful stretch of rather rugged country in which stock-raising is the leading industry, some of the finest ranges in the State lying within the vicinity of Pocatello.

Among other progressive towns in Idaho are Moscow, in Latah County, seat of the State University, and finely situated in a rich agricultural region within the famous Palouse district; Lewiston, at the confluence of the Snake and Clearwater rivers, the seat of a United States land office and of a State normal school, and an important distributing point for the interior mining country; Wallace, a thriving town within one of the richest mineral and timber regions of the State, and Weiser, the distributing point of the Weiser Valley, famous for its excellent fruit.

Historical. The territory now comprised in Idaho originally formed a part of the Oregon country acquired by the United States by discovery in 1792 and by treaty in 1846. This region was visited by Father De Smet between 1840 and 1850, during his tours among the Rocky Mountain Indians, when a number of Jesuit missions were established, one of the most prosperous being the Cœur d'Alene. Fort Lemhi was erected in 1854 by a colony of Mormons, who were finally forced by the Indians to return to Salt Lake. The real settlement of the country, however, began with the discovery of gold in 1862, after which a great tide of emigration set westward. In 1863 was proclaimed the organization of the Territory, establishing the capital at Lewiston. The original boundaries included the present State of Montana and a part of Wyoming.

Between 1865 and 1868 prospecting was greatly retarded by hostilities with the Indians, and from 1874 to 1878 the country was much disturbed by Indian wars, but after the close of that period no serious difficulty was experienced with the various tribes. Idaho was admitted into the Union as a State in 1890. Dissension regarding the location of the capital, which had been removed to Boise in 1865, existed for years, and the constitution declares that the seat of government shall be at Boise for twenty years, dating from the admission of the State, when the question of a permanent location of the seat of government is to be submitted to the people.

THE BRIDGE OVER THE SNAKE RIVER AT LEWISTON

The Snake River forms the western boundary of Idaho for a long distance. Eventually, however, the lava escarpment of the Clearwater Plateau crosses its path and turns the river abruptly westward into the State of Washington. At the point of deflection stands the city of Lewiston, and a great steel bridge stretches across the stream from bank to bank, making a graceful picture with its framework silhouetted against the slopes of the dark lava hills beyond.

THE GOLD-BEARING VALLEY OF MOORE CREEK

At Idaho City is a typical gold-producing district of that kind in which the precious metal is secured from alluvial deposits. The valley of Moore Creek widens out at this point, forming a broad and flat flood-plain, encircled by hills upon whose sides are gravel terraces that are rich in gold, while over the valley bottom are spread other gold-bearing gravels of great value. A portion of the city is built upon the flats, standing only a few feet above the accustomed level of the creek.

WYOMING

WYOMING, one of the Plateau States of the American Union, has an area of 97,890 square miles, of which 315 square miles is water surface. The population, which is increasing steadily with the development of the State's resources, is largely rural, there being few cities of any considerable size. About 18 per cent of the population is foreign-born. Among this class the natives of the United Kingdom are first in numbers, followed by the German and Swedish elements.

THE CAPITOL AT CHEYENNE

In 1869 the territorial organization of Wyoming was inaugurated and Cheyenne became the capital city, it being then the largest town of the Territory, the most important trading center, and possessor of most promising prospects. Other cities have sprung into prominence since then, but Cheyenne has retained its honors. In 1888 was built the Capitol, a handsome building of Rawlins sandstone, which, located upon rising ground and facing the long vista of Capitol Avenue, is prominent in every view of the city.

Mountains. The surface of Wyoming is greatly diversified, being broken by the mountain ranges which, although trending in general north and south, have spurs extending at every conceivable angle from the main chains. The Laramie Range, from fifteen to forty miles wide, with a mean elevation of about 8,242 feet, lies in the southeastern section. Farther west the Sierra Madre extends northward from Colorado. North of the Sierra Madre lie the Seminole and Green mountains, that extend toward the west and unite with the Wind River Mountains. The last-named range, trending northwestward, forms part of the continental divide, and is at last merged in the principal chain of the Rocky Mountain system.

In Northwestern Wyoming the Teton Range, lying close to and parallel with the State line, extends northward from the point where the Snake River enters Idaho into the Yellowstone National Park, in the extreme northwest corner of the State. Southeast of the Park lies the Absaroka (Shoshone) Range, which extends eastward and southward between the Yellowstone and Big Horn valleys. South of the Owl Creek Mountains, which are a continuation of the Absaroka Range, is a plateau which extends to the Rattlesnake Range on the east, and on the north to the Big Horn Mountains. Throughout Northeastern Wyoming the surface is broken by mountainous projections from the Black Hills of South Dakota.

THE GRAND TETON AND ADJACENT PEAKS

Northward and southward in Western Wyoming extends the rugged range of the Tetons, its sides furrowed where ancient glaciers have left their traces and its peaks reaching nakedly upward far beyond the timber line. Explorers who dare the dangers of its fastnesses find there a few small glaciers, relics of the Great Ice Age of geologic times. The highest point of the whole range is the Grand Teton, a landmark of the region.

The mountain ranges of Wyoming, therefore, may be divided into four general chains, namely: The Black Hills, entering the northeast corner of the State from South Dakota, with which may be grouped the Bear Lodge Mountains and some lower hills; the Big Horn Mountains, rising in Montana and trending southward into Central Wyoming; the Rocky Mountains, stretching diagonally across the State from the northwest corner and including a number of ranges, the farthest south of which pushes into Colorado; and lastly a stretch of ranges in the extreme west extending across the State and on the south crossing into Utah. Between these several mountain chains intervene the vast areas of rolling plain from which the elevations rise irregularly and often abruptly and in which the principal rivers have their upper courses. Wyoming contains several mountain peaks that are surpassed in elevation and grandeur by few other eminences in North America. The loftiest of these is Fremont Peak (13,790 feet), in the central portion of the Wind River range.

Rivers. The most important river in the State is the North Platte, which enters Wyoming from Colorado, flows northward and, bending around the northern end of the Laramie Range, sweeps southeastward and passes into Nebraska, after a course through the State of about three hundred miles. Among its tributaries are the Laramie and Sweetwater rivers and other smaller streams. The Laramie, also rising in Colorado, joins the North Platte River at Fort Laramie. From the west flows the Sweetwater River, which joins the North Platte near the southern border of Natrona County, 115 miles from its source. Crow Creek, on which is situated Cheyenne, the State capital, is a tributary of the South Platte River. North of the North Platte is the South Fork of the Cheyenne River, flowing eastward into South Dakota. Still farther north is the Belle Fourche River, which rises in the eastern watershed of the Powder River, and flows northeastward for 120

ROCK FORMATIONS AT RED BUTTE

In many portions of Wyoming the landscape presents curious features due to the erosion of sandstone rocks by natural forces. On the higher levels more especially are these forms seen, for here in former ages great glaciers forced their way through mountain valleys, scouring gorge and cliff with resistless power and, passing, left fantastic shapes in stone to mark their downward progress.

miles into South Dakota. West of the Belle Fourche River and flowing almost due north is the Powder River, which rises in the Rattlesnake Mountains and passes into Montana. West of the Big Horn Mountains is the Big Horn River.

Other important waterways are the Green, Bear, Snake, and Yellowstone rivers. The Green River, rising in the slopes of the Wind River and Gros Ventre ranges, flows southward, crossing the southern border of the State and uniting with the Grand River in Southeastern Utah to form the Colorado River. The Bear River, in the southwestern part of the State, flows into Utah and finally empties into the Great Salt Lake. The Snake (Lewis or Shoshone) River rises in Shoshone Lake in the Yellowstone National Park, flows southward through several lakes and canyons in Wyoming and westward into Idaho on its way to join the Columbia River. The Yellowstone River rises in Northwestern Wyoming, traversing the Yellowstone National Park.

Yellowstone Park. The Park is a national reservation situated in the extreme northwest corner of Wyoming, its boundaries extending slightly into Montana and Idaho. It is an oblong tract of land fifty-four miles wide from east to west and sixty-two miles from north to south, with an area of about 3,300 square miles and an altitude of about 8,000 feet above sea-level. The region consists mainly of a plateau broken by groups of mountains, inclosed on the east by the Yellowstone Range. The most important and interesting natural features of the Park cluster around the lake from which it takes its name and the stream which flows through the lake. Yellowstone Lake is the largest lake in Wyoming. It is about twenty-two miles long and ten to fifteen miles wide, with a depth of 300 feet, and is surrounded by a cordon of majestic mountains crowned with perpetual snow. Near the exit of the river from the lake is a belt of hot springs three miles long and one-half of a mile wide. About fifteen miles below Yellowstone Lake the river plunges over two precipices, the upper being 112 feet high and the lower 310 feet high. Beyond the latter the river enters the Grand Canyon, a mighty cleft in the volcanic rocks, twenty miles long, whose overhanging walls from 600 to 1,200 feet high are gorgeous with color.

Within the Park are several thousand hot springs, chiefly calcareous or silicious, which deposit around their borders elaborate and exquisitely ornamented forms varying widely in color and design. Among the more striking phenomena are the geysers or spouting hot springs. Within a limited locality occur about fifty of these geysers, which periodically throw columns of water to heights of 50 to 200 feet. These features are due to the fact that the Park is a surviving remnant of the great active volcanic area which formerly covered much of the Northwest.

Climate, Flora, and Fauna. The climate of Wyoming in general is mild. The air is dry and clear, the summers short and cool, and the winters long and frequently severe. The mean temperature for January at Sheridan, in the northern part of the State, is 18°, and at Cheyenne, in the southern portion, it is 25°. The average July temperature in both cities is about 67°. The high altitudes of the mountain regions have a strong influence toward tempering the summer heat. The more elevated parts of the State as a rule have fairly abundant rainfall, but some portions of the great valleys, more especially those located in the western part, have extremely little precipitation, and irrigation projects are necessary to make extensive agricultural effort possible.

PULPIT TERRACE, YELLOWSTONE PARK

The stone terraces of the Mammoth Hot Springs, famous the world over because of gorgeous coloring and beautiful forms, are due to a deposit of calcareous matter which solidifies into marvelous stalactic formations. Pulpit Terrace resembles an old-time pulpit, in which the preacher's carved desk extended high above the level of the platform on which it rested.

OLD FAITHFUL

Many of the geysers of the Yellowstone Park are irregular in their activity, but Old Faithful roars forth year after year with boisterous vehemence every seventy minutes, without fail, sending 150 feet in air a mass of hot water and steam.

The flora comprises many hundreds of indigenous species. The aspen, box-elder, cottonwood, and similar trees are found along the watercourses. The forests of the State, however, are chiefly in the mountain ranges and consist mainly of conifers, such as the pine, cedar, spruce, hemlock, and fir. The wild animals of the State are the mountain-lion, wildcat, lynx, wolverine, wolf, fox, beaver, mountain sheep, goat, antelope, elk, deer, moose, and bear.

Resources and Industries. The natural resources of Wyoming are to a great extent undeveloped. Gold, silver, copper, tin, lead, iron, kaolin, fire-clay, mica, graphite, cinnabar, asbestos, antimony, gypsum, soda, magnesia, sulphur, granite, marble, limestone, sandstone, petroleum, and coal have been found among the mountains. Gold was discovered in 1867 between the base of the Rattlesnake Mountains and the Sweetwater River, and since then the metal has been found in other localities and a large number of mining claims have been

developed. Silver has not been disclosed to the same degree as gold, and its production is unimportant. Copper is mined to some extent in the region adjacent to Rawhide Buttes, in Medicine Bow Mountains, and in other localities. The mines promise well upon development, while lead, iron, and other metals assure large returns with

EXPOSED COAL VEIN IN CARBON COUNTY

Wyoming is rich in mineral wealth and its extensive coal beds include high-grade bituminous deposits, with surface outcroppings which make it possible to mine them easily and profitably. One of the well-known workings is at Hanna, in Carbon County, which is exposed where a railway cut has been made on a hillside.

increase of transportation facilities. Coal is the most widely distributed of the minerals of the State, being mined in almost every county. Sweetwater and Uinta counties are the heaviest producers. Nickel and platinum deposits have been located, but are not yet developed into commercial importance. Gypsum is mined near Laramie and Sheridan. Petroleum exists in connection with the coal deposits. The important fields are located at Salt Creek, in Natrona County, and the Popo Agie district, in Fremont County.

Large forests of merchantable timber exist in the northwestern part of the State, the aggregate timbered area being estimated at about one-eighth of the total of the commonwealth. Lumbering is not allowed in the Yellowstone Park, and outside of the Park it is restricted in the best districts by the forest-reserve regulations of the federal government. The value of the timber will become very important commercially as settlement becomes more dense and cities come into existence in larger numbers.

The cultivable area of Wyoming is large; part of the State, however, is situated within the arid region and, the rainfall not being sufficient to insure regular and unfailing crops, agriculture is largely dependent upon irrigation. The principal farm crops are hay, oats, wheat, and potatoes. The extent of fine grazing land in the State gives prominence to stock-raising. Wyoming is the second State in the Union in the size of its wool product. Cattle and horses are raised and shipped to more eastern markets in large numbers.

Although Wyoming is preeminently a stock-raising and mining region, it has made important advances in manufacturing and mechanical industries during the last three decades. The products of the mills and factories, however, are mainly for local consumption. Lack of facilities for transportation has been a serious hindrance to the rapid development of the branches of manufacturing industry.

Chief Towns. Cheyenne, the capital, situated on Crow Creek, is the largest city in the State. It is a railway junction and the large stock and mining interests of its inhabitants make it a business center of considerable importance. Laramie, situated on the river of the same name in Albany County, has large railway repair and machine shops and rolling mills. It is the site of the State University, the State Agricultural College, and other public institutions.

Rock Springs, situated on a tributary of the Green River, in Sweetwater County, is a prosperous town, lying in the center of the most valuable coal-mining district of the State. The surrounding country has many productive valleys and a wide grazing area. Rawlins, in Carbon County, is a growing town on the line of the Union Pacific Railroad. It is the base of supplies for an extensive and rapidly developing mining region. Evanston, near the southwestern corner of the State, is located in the rich Bear Valley, on the Union Pacific Railroad. Sheridan, in the northern part of the State, is the center

THE UNIVERSITY OF WYOMING

Like other American commonwealths, Wyoming has created an educational system with a State University as its summit. Founded in 1887 and located at Laramie, the University of Wyoming has developed a large sphere of usefulness by its technical instruction. Especially in the promotion of agriculture and allied lines of industry the school has become a recognized power in the industrial development of the State.

of a stock-raising country. Newcastle, in the Black Hills region, is notable for its excellent coal mines.

Historical. It is claimed that the first white visitors were Canadian explorers who in 1743-44, under the leadership of De la Verendrye, ascended the gorges of Wind River. John Colter, a member of the Lewis and Clark expedition of 1804-06, visited the region of the Yellowstone later. James Bridger was in the same region between 1840 and 1845. In 1869 a party of surveyors spent more than a month in the region of the Park. Previous to 1840 very little was known of the southern portion of the State, which was the habitat of Indian tribes who were disturbed only by roving and adventurous hunters. The building of the Union Pacific Railway opened the country to settlement. In 1870 Wyoming had about 10,000 white inhabitants, who were located principally in the southern section of the State, near the railway. The entire northern section was overrun by Indians, who were not brought into subjection until 1876–77, when Gen. George Crook succeeded in reducing them. In 1867 gold was discovered in Wyoming, and when peace was restored settlers and miners began to seek homes and profitable occupations within the borders of the country. In 1868 Wyoming was erected into a Territory, and in July, 1890, it was admitted as a State into the Union. Since that time development has been slow but on a permanent basis.

CATTLE HERD IN SHERIDAN COUNTY

In Northern Wyoming are extensive plains of nearly level land, girdled by sheltering mountain ranges and watered by many small streams. Here is one of the famous grazing regions of America, where miles of country are occupied by vast cattle herds that feed, summer and winter, upon the wild grasses, ranging at will in the warm seasons and drifting hither and thither with the driving storms in winter.

COLORADO

COLORADO, situated in the Rocky Mountain region, has a total area of 103,925 square miles. The State consists of parts of the Territories comprised in the Louisiana Purchase of 1803, the Texas annexation of 1845, and the Mexican cession of 1848. About one-sixth of the population is of foreign birth. Owing to the mining industries, about one-half of the population is urban.

Mountains. The surface of the State is divided naturally into three well-marked sections. One-third of the eastern half consists of the extensive plains forming the western extension of the open prairie country stretching from the Mississippi River to the foothills of the Rocky Mountains. West of the plains are the well-watered and well-timbered foothills, which have elevations varying from 6,500 to 8,000 feet above sea-level. Beyond these lies the Rocky Mountain division of Colorado, covering nearly the entire western half of the State and including some of the most notable elevations of that great chain. The Rocky Mountains traverse the State in a succession of nearly parallel ranges extending north and south, from which are projected spurs and ridges, equally rough in character. These mountains are cut into by several deep defiles or passes; the highest of these is Mesquite, 13,308 feet above sea-level, while many others reach elevations of 10,000 to 12,000 feet. There are over 100 peaks in Colorado that exceed 13,000 feet in altitude, while Massive Mountain, the highest peak in the State, is 14,424 feet high. Pikes Peak, more famous but of less elevation, measures 14,108 feet. The Medicine Bow, Front, Park, Saguache, Sangre de Cristo, Culebra, and San Juan are the dominant ranges.

The range usually called the "Continental Divide," but also known by other names, constitutes one of the most important parts of the entire mountain system of Colorado. This elevation, marking the loftiest general height of the mountains, divides the waters flowing to the Atlantic from those trending to the Pacific.

THE CAPITOL AT DENVER

Denver became the seat of government in 1868, owing its selection as such to the fact that it was a depot of transmontane travel and freight traffic, there being at that time no railroad across the State. Not until 1881, however, was the city by a referendum vote fixed upon permanently as the capital. The attractive building that contains the State offices was completed sufficiently for occupation in 1895. From its dome can be had a splendid view covering 200 miles of the Rocky Mountains.

Intermontane Valleys. Between the Colorado mountain ranges lie the "parks," broad elevated tracts of land having rich, well-watered soil, and a surface diversified with undulating hills, winding valleys, and crystal lakes. They are walled in by lofty, forest-clad, or snow-capped peaks, and through them flow the streams that form the great rivers of the State. For scenic beauty these parks are not surpassed in the United States, and they have become famous throughout the world. The principal parks are in the central part of the State. The most northerly is called North Park and has an area of 2,500 square miles. It is bounded on the east by Medicine Bow Range. Next to it on the south, separated by mountain spurs, is Middle Park, with the Front Range of the Rocky Mountains on the east and Gores Range on the west. Its height is about the same as that of North Park and its area is about 3,000 square miles. South of Middle Park, and separated therefrom by an extension of Front Range, is South Park, embracing 2,200 square miles of area. It is bounded on the west by Park Range and on the east by Rampart Range, at the foot of which is Pikes Peak. San Luis Park, the largest and perhaps the most beautiful of all, lies still farther south, the San Juan Mountains forming its western and the Sangre de Cristo and Culebra ranges its eastern boundary, its area being 9,400 square miles.

THE ECHO CLIFFS, NEAR GRAND JUNCTION

The canyon of the Grand River, while not to be compared in impressiveness with that of the Colorado, into which it debouches, is nevertheless a chasm of great depth and beauty. A railway follows the river through the great gorge, winding to the right and left with the successive turnings of the stream. In places the rocks are brilliantly tinted, creating a panorama of glowing color, while at other points are sculptured rocks, graceful and fantastic in form, alternating with gigantic cliffs.

Rivers. As the source of great streams that water many other States, the river systems of Colorado are interesting. Both the North and South Platte rivers rise in the State, the former flowing north into Wyoming a short distance from its origin in North Park, while the latter, having its rise in the foothills, has a course of about 120 miles across the eastern plains till it leaves the State at its northeast corner. The Arkansas rises in the mountains around Leadville and flows eastward. Its principal tributaries are the Huerfano and Purgatory rivers. In Frémont County it crosses the mountains through the canyon of the Arkansas. South of the mountain region the land is watered by the headwaters of the Rio Grande del Norte and the San Juan. Of the western rivers, the Grand rises in Middle Park and flows westward, joined by many tributaries, among them the Gunnison River, which flows from the Saguache Mountains. None of the rivers of Colorado is navigable. On the eastern plains they are largely diverted to the purposes of irrigation. The State has also a large number of small lakes, especially in the mountain region.

SANDSTONE TOWER, MONUMENT PARK

A region near Manitou, known as Monument Park, has attained some celebrity among tourists because of the presence of extraordinary rock shapes, formed by the long-continued action of the weather upon the cream-colored sandstone of the locality.

River Canyons. Among the grandest physical features of the Colorado landscape are the canyons cut by streams in the mountain sides, forming gorges which in some instances have a depth of 3,000 feet. In the eastern part of the Uinta Range a number of such canyons divide the mountains. The waters of the Green River basin escape through the inclosing ranges by way of the Horse Shoe Canyon and by another, called the "Gate of Ladore," the perpendicular walls of which rise more than 2,000 feet above the water. In the Yampa Mountains passages have been worn in the strata of hard rock that are from 600 to 1,200 feet deep, extending for a distance of twenty miles in a straight line. Along the Arkansas River are gorges with walls rising almost vertically 3,000 feet above the water. The canyon of the Grand River is another remarkable passage, having a length of forty miles and a depth of 2,500 feet.

IRRIGATION FLUME, NEAR GREELEY

The town of Greeley was planted in the Cache Valley by New Englanders, whose industry in the development of irrigation has here made waste places into one of the richest farming communities in the State. Here was founded the first large irrigation enterprise in Colorado.

Climate, Flora, and Fauna. As in most mountainous countries the climate of Colorado varies with the altitude, but in nearly all localities it is salubrious. On the plains and among the foothills the summers are often oppressive, while in higher altitudes they are cool and pleasant. In winter the temperature is mild and the snowfall light, except among the mountains, where severe cold with heavy snows often prevails. The extremes of temperature are widely separated. At Denver, about 5,200 feet above the sea, where the mean annual temperature is 49°, the thermometer ranges from 105° in midsummer to 29° below zero in midwinter.

Vegetation in Colorado is that common to the Rocky Mountain region. The mountains are well timbered and large areas consist mainly of growths of red fir, yellow pine, Engelman spruce, and lodgepole pine. In mountainous and wooded sections animal life exists in great variety. The lowlands and valleys of Colorado were once the favorite abode of the bison. Bears, cougars, wolves, deer, and other wild game now attract the sportsman. Innumerable prairie-dogs infest the plains, and in the regions most difficult of access antelopes and Rocky Mountain sheep roam at large.

Mines and Manufactures. Mining continues the great industry of the State, and, of the minerals found, gold, silver, lead, and coal are of the greatest commercial importance. Colorado ranks first among the States in the output of gold and silver. Tunneling the mountains to reach the veins at a low altitude has led to the discovery of mines of surpassing richness. Copper, lead, and zinc are frequently released in the smelting of gold and silver, and pure copper ore is found. Colorado ranks next to Idaho and Utah in the amount of lead obtained from ores smelted in the State. The output of iron ore is large. The coal-measures of the State comprise an area of about 2,900 square miles, Las Animas County being the heaviest producer. Petroleum is found in the Florence and Boulder oil-fields. The zinc produced is considerable and is largely exported.

Colorado has become the seat of many flourishing manufactories producing supplies to meet the demands of its own people. The leading industries of this sort naturally are those based on the output of its mines. Colorado is the greatest smelting State of the Union, sending out a valuable product in the smelting of lead, silver, and gold. Iron and steel manufactures, although far inferior in aggregate value to the products of smelters and refineries, have importance, owing to the abundant local supply of raw materials. Mining machinery is manufactured largely within the State.

CATHEDRAL PARK, NEAR CLYDE

Westward from Colorado Springs and near Clyde, a little place upon the railroad, is Cathedral Park, an intermontane valley partly enclosed by giant uplifts of rock, but affording a beautiful vista of the mountain scenery that lies outstretched beyond its own limits. While far less striking in its features than some of the more famous scenic spots, Cathedral Park is, however, really more characteristic of the cordilleran region of Colorado as a whole.

THE SUMMIT OF PIKES PEAK

A barren waste of broken granite lies at the summit of Pikes Peak. Across it extends the track of the cog-wheel railway, with its terminus at a low stone structure which was originally built as a weather observatory of the Federal government but for a number of years has been used as a hotel for visitors.

The farming interests of the State support many flouring mills, packing houses, and fruit canneries.

Farms and Forests. Hay and cereals constitute the principal forms of farm crops. Potatoes are grown extensively in the north. The orchard products of the State include apples, peaches, plums and prunes, pears, cherries, and apricots, all largely exported. Many small fruits, such as strawberries and raspberries, are cultivated, while Colorado melons are shipped to every part of the Union Stock-raising, however, forms the most valuable agricultural interest in the State. Cattle and horses are the main features, but sheep ranches are increasing in the southern counties. Of the total area of Colorado about 30,000 square miles lie within the arid belt, where the insufficient rainfall has made irrigation necessary. The principal crops raised by irrigation are alfalfa and other hay, wheat, oats, corn, and orchard fruits.

Lumbering is carried on extensively in the mountainous areas adjacent to the railway lines, and the product supplies a large part of the timber used for home consumption within the State. As in other Western States, the Federal Government has set aside forest reserves over which it exercises wardenship.

Chief Cities. Denver, the capital and largest city, is about 5,200 feet above the sea. Through the wonderfully clear atmosphere may be seen Pikes and Longs peaks and other snow-capped mountains, seventy miles away. The dryness of the air has made the city a health resort of some fame The city has large business interests and it contains about one-half of the manufacturing establishments of the State. It is one of the great railway centers of the West.

Pueblo, situated on the Arkansas River, is an active commercial and industrial city, and an important railway center of the southern counties. The smelting of gold, silver, copper, and other ores is the leading industry. Colorado Springs lies at the base of the Rocky Mountains, five miles from the foot of Pikes Peak and 6,000 feet above sea-level. It is one of the most beautiful cities in the West and is widely known as a health resort. Near the city is Manitou, celebrated for its mineral springs.

Leadville, situated on the western slope of the Park, or Mosquito Range, is walled about by snow-capped mountains and lies within a region of grand panoramic loveliness. The city has become a large industrial center widely known for the smelting of silver and lead. Cripple Creek, one of the most celebrated mining towns in the world, lies about twenty miles west of Colorado Springs, on the opposite side of Pikes Peak.

Boulder is the site of the University of Colorado. It has extensive mercantile, manufacturing, and mining interests; flour and brick are the principal manufactures, and the local mines yield gold, silver, lead, and coal. Trinidad is a point for shipments of coal and cattle, the mining and stock-raising interests of the region being large. Victor is likewise a prosperous town connected with mining; some lumbering is done in the forests. Canyon City is a mountain health resort having mineral springs of great medicinal value; important mines exist near the city Salida is a center of a mining and agricultural district. Grand Junction is notable because of the prosperous fruit-growing country that surrounds it.

ANCIENT TOWER RUINS, MONTEZUMA COUNTY

The Mancos Canyon, with a number of side canyons opening into it, is famous for remains of ancient buildings used by the cliff-dwellers in the dim past. Of these the twin towers in the Lost Canyon are among the best preserved. Their former use is uncertain, opinions varying as to whether they were lookout towers, places for religious rites, or cisterns for the storage of water. Their age is equally uncertain.

Historical. The first account of the territory now included in Colorado was that given by Juan Vasquez de Coronado, who commanded a Spanish expedition that pushed into this country from Sinaloa, Mexico, in 1540. However, failing to find gold, the Spaniards withdrew, and the region remained an unknown land until 1806, when it was explored by direction of the United States Government, and Maj. Zebulon M. Pike discovered the famous mountain peak that bears his name. In 1820 another expedition was sent out under Col. S. H. Long, for whom Longs Peak was named, and in 1842–44 the Rocky Mountain district was explored by Col. John C. Frémont. At that time the only inhabitants were a few Mexicans and Spaniards residing in the southern section of the territory. The western part of the present State was embraced in the cession made by Mexico to the United States in 1848. Until the discovery of gold within the State in 1858 the population was composed almost entirely of trappers and hunters, but after that discovery settlers came in rapidly The first attempt at a territorial government was made in 1858, and the next year a constitution was framed which, upon submission to the people, was rejected. In February, 1861, Colorado was organized as a Territory, with its present boundaries, and, in 1866, admitted into the Union. This action, however, was vetoed by President Johnson and the territorial form of government continued until 1876, when Colorado was actually admitted into the Union as a State.

THE GATES AJAR, GARDEN OF THE GODS

NEW MEXICO AND ARIZONA

NEW MEXICO

NEW MEXICO TERRITORY lies upon the southwestern border of the United States. Its area of 122,580 square miles includes only 120 square miles of water surface. The population is about evenly divided between natives of Spanish descent (most of whom speak English) and people whose birth or parentage is that of the population in the older American States. The foreign-born element is small. The Indian tribes are Pueblos, Navajos, and Apaches.

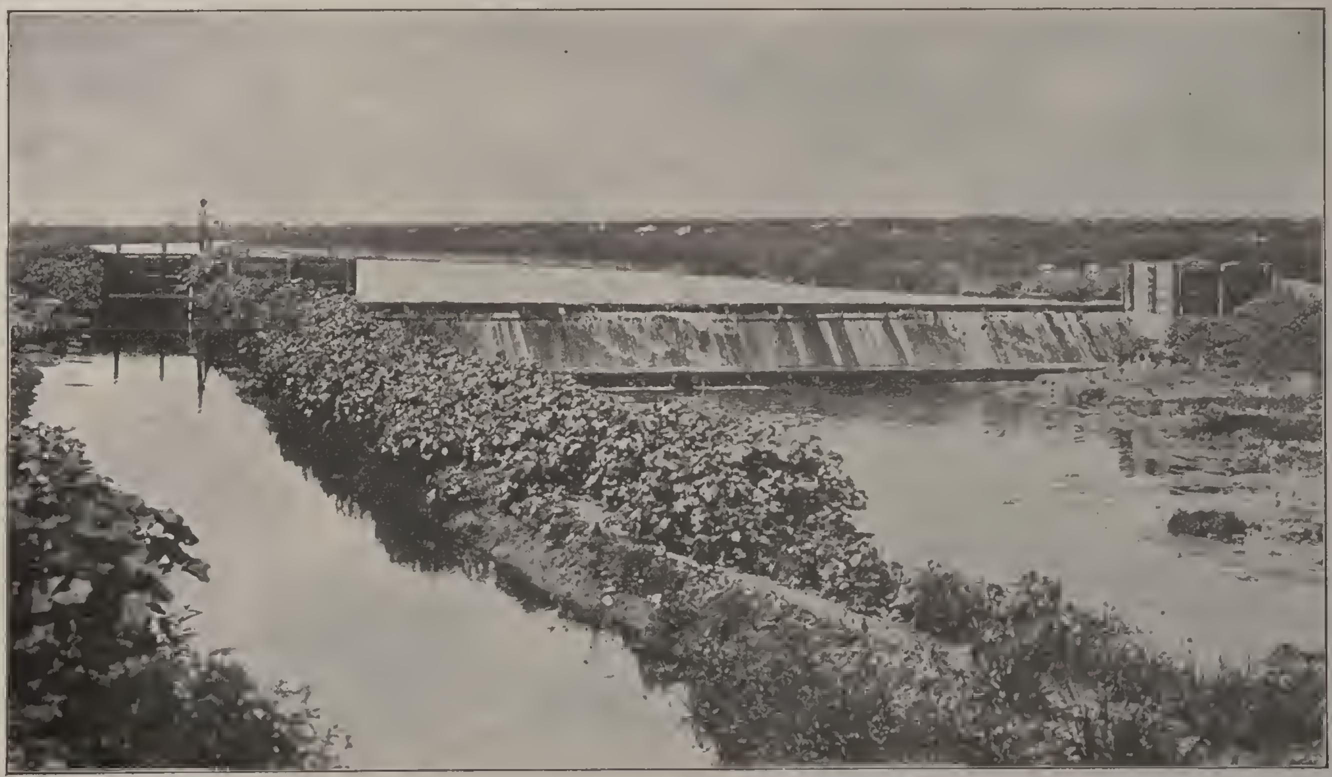
Surface Features. The main range of the Rocky Mountains is continued into New Mexico on the north, but terminates as a continuous range a few miles south of Santa Fé. In these mountains are found some of the highest peaks in the Territory, including Cerro Blanco (14,269 feet), the Truchas (13,275 feet), and Taos (13,145 feet). Extending east and west along the Colorado boundary in the east are the Raton Mountains. Lying east of the Rio Grande or Rio Grande del Norte and extending southward from the main line of the Rocky Mountains is a broken range known in various localities under different names, the longest section being the San Andreas Mountains. Still farther eastward, occupying the southern portion of the eastern plain, are other short, isolated mountain ranges. The southeastern part of the State is level or sloping toward the border line, and east of the Upper Pecos is the western part of the great sterile area known as the Llano Estacado, or the Staked Plain. In Southern New Mexico, between the Rio Grande and the Pecos Rivers, are extensive deserts known as the Gypsum Plains. This region is the bottom-land of a vast basin extending from the foothills of the Capitana Mountains to the extreme southern boundary of the Territory. It is almost surrounded by mountain ranges or hills. The extensive table-land west of the Rio Grande is traversed by detached ranges of mountains, usually of slight elevation, in places inclosing fertile valleys, at other points showing cliffs and gorges. In various localities occur the peaks of extinct volcanoes.

THE CAPITOL AT SANTA FÉ

The ancient town of Santa Fé became the capital of a frontier district under Spanish rule about 1605. It continued to be a center of official authority under the government of Mexico, after that country threw off the Spanish yoke. American conquest in 1846 made it the headquarters of military rule until New Mexico Territory was organized in 1851, since when it has been the territorial capital. The completion of a handsome building in 1900 gave the government a worthy home of modern style.

Hydrography. The drainage of the eastern two-thirds of New Mexico reaches the Gulf of Mexico through two channels, namely, the Rio Grande with its great tributary, the Pecos, and the Canadian River. The Rio Grande, having its source in Southern Colorado, enters New Mexico through the Rio Grande Canyon, which in some places is 300 or 400 feet deep. After traversing the Territory from north to south, the Rio Grande enters, at Rincon, another large canyon that extends to Fort Selden. Below Fort Selden the basin of the river widens for a distance of about thirty-five miles, forming the Mesilla Valley, a region unsurpassed in fertility. The Pecos River, rising on the eastern side of the Santa Fé Range, takes a southeasterly and southerly course. The upper course of the stream is through narrow valleys and deep gorges, which change farther down to rolling hills and prairies. The Canadian River, with numerous tributaries, drains the northeastern corner of the Territory.

Climate, Flora, and Fauna. New Mexico is noted for its dry, pure air and clear skies. In the elevated portions of the Territory the winters are quite severe, but farther south, owing to the decrease in altitude as well as to the change of latitude, the climate is warmer, the temperature seldom falling below the freezing point. At Santa Fé the temperature ranges from 13° below zero to 97° above, the mean annual being about 49.3°. Rainfall is very light and occurs chiefly during the summer.



THE FELIX IRRIGATION DAM, AT HAGERMAN

In the once barren Pecos Valley, in New Mexico, the development of irrigation has worked wonders, transforming bits of wilderness into blooming gardens. A splendid system of reservoirs, wells, and canals has been constructed to treasure up the uncertain wealth of water. At Hagerman, a thriving town in Chaves County close by the Rio Felix, is the Felix dam, which does good service by forming one of those reservoirs upon which the farmers depend for their prosperity.

There are few plants of beauty or value indigenous to New Mexico. The yucca and canaigre are native to the Territory and several varieties of uncultivated forage grasses occur; black grama is found on the high mesas or rocky hillsides, and the joint-grass and grapevine mesquit grow in the lower lands. Other forage plants are the prickly-

pear, pearl millet, tornilla, and the valuable alfalfa. The principal forest trees are spruces, firs, yellow pine, and scrub-oak, but the cedar, mesquit, and piñon flourish in abundance on the foothills.

Much big game still exists in New Mexico, as Rocky Mountain goats, mountain sheep, mountain lions, elk, deer, and bears. Of the antelopes that once roamed the Territory in great herds, comparatively few remain. Quail, several species of pheasant, and other game-birds are plentiful. Trout inhabit the mountain streams.

Agricultural Industries. Agriculture is the occupation of about two-fifths of the people. Alfalfa and other forage crops are first in aggregate value among the products. The principal cereals, corn and wheat, are staple crops throughout the Territory. Oats are grown chiefly in the north. The development of irrigation facilities permits a steady increase in cereal production. Apples, peaches, plums, pears, cherries, and apricots are grown extensively. Among vegetables, sweet potatoes and beans are staple food materials of the people. Tobacco and cotton have been introduced, but their culture is still experimental. Viticulture has made some progress. There are many live-stock farms and their value constitutes a large proportion of the total value of farm property. Cattle are raised in nearly all sections, but sheep-raising ranks first among the live-stock interests. Lake Valley, in Sierra County, is the center of the Angora goat industry. The wool output of New Mexico in general is distinguished for its fine quality.

OLD CHURCH, SANTA CRUZ

The old church at Santa Cruz, north of Santa Fé, which was built by Spanish missionaries in 1796, has no special fame in history, but it is a well-preserved and picturesque example of mission architecture.

Irrigation is one of the prominent features of New Mexican agriculture, since the State lies within the so-called arid region of the West. Large areas are watered by systems of artificial water distribution, some of them very extensive and costly. The celebrated Pecos Valley system is one of the greatest completed projects within the United States.

Mines and Manufactures. The most valuable mineral deposits are those of the precious metals and coal. Grant, Socorro, and Colfax counties are the chief gold and silver producers. Grant produces most of the copper, and Socorro the greater part of the lead. Colfax and McKinley are the coal-producing counties. Large deposits of iron ore occur in Grant County and lead, sandstone, and mica are produced elsewhere in small quantities. New Mexico also has become one of the chief sources of the world's supply of turquoise.

The most important manufacturing enterprises are railway-car shops, copper and lead smelteries, flouring and grist mills, carpenter shops, lumber and timber mills, and planing mills. Wool-scouring establishments have been erected during recent years and factories for the making of beet-root sugar and the canning of various kinds of fruit exist.

THE INTERIOR OF AN INDIAN "PUEBLO," OR VILLAGE

In New Mexico are the so-called Pueblo Indians, a number of distinct tribes that attained a crude civilization long before the Spanish conquest, and live to-day much as their ancestors lived centuries ago. Their villages are in the form of single communal structures of adobe or stone, to the separate apartments of which access is gained by means of ladders and trap-doors. In the dry, hot climate of the Southwest these homes are as healthful and comfortable, perhaps, as any that could be devised.

Chief Cities. Albuquerque, the commercial metropolis, is divided into two parts. Old Albuquerque, which is situated near the Rio Grande, dates from the 17th century; the modern portion of the town dates from the advent of the railway in 1880. The city is the seat of the University of New Mexico and has important manufacturing interests. Santa Fé, the capital of New Mexico since 1640, was originally a populous Indian pueblo. It became the main station on the old trade route between the United States and Mexico and still continues to be the center of supply and shipment for the surrounding country. The city is the seat of a Roman Catholic archbishop and contains a number of mercantile establishments.

Las Vegas, situated about forty-four miles east of Santa Fé, is a prosperous railway, manufacturing, and trading center. The city enjoys a pleasant climate throughout the year and the hot springs in its vicinity make it a health resort of some celebrity. Raton, the "Gate City" of New Mexico, is the prominent industrial and railway center of the northeastern part of the Territory. It is the center of a valuable coal and oil belt and is surrounded by a fine grazing and agricultural district. Roswell, the commercial center of Southeastern New Mexico, is the supply point and shipping center for an immense cattle and sheep raising area. Alamo Gordo is the center of a fruit-growing region. Gallup is the chief coal-mining town.

Historical. New Mexico was visited by Cabeza de Vaca in 1536 and by Coronado in 1540. Later, missions were established in the region and in 1598 the Spanish authority was given military support by Juan de Oñate. From this time immigration to the new country increased slowly. Forts and missions were established, colonies founded, and mines opened, and in a short time the Indians were practically reduced to a state of slavery. In 1680 the natives drove out their Spanish masters, who did not regain possession of the country until 1692–93. In the beginning of the 19th century overland traffic by way of the Santa Fé trail began. On the outbreak of the Mexican War in 1846, General Kearney's force easily took possession of New Mexico, and in 1848, by the Treaty of Guadalupe-Hidalgo, the region was ceded to the United States. Territorial government was organized by order of Congress in 1851. By the Gadsden Purchase, negotiated with Mexico in 1853, a tract of about 45,000 square miles, now included in the southern part of Arizona and New Mexico, was annexed to the domain of the United States, and in 1866 the present boundaries of New Mexico were finally delimited. Statehood seems likely to be attained in the near future despite the small population.

ARIZONA

Arizona, a Territory of the United States which lies on the Mexican border, has an area of 113,020 square miles, including about 100 square miles of water surface. About one-fifth of its population is foreign born, being composed chiefly of Mexicans. The Indian element, which is mostly of the Navajo tribe, is large.

Surface Features. Arizona is naturally divided into two distinct regions. A high table-land known as the Colorado Plateau, ranging from 6,000 to 8,000 feet in elevation, forms the northern and eastern portions. This plateau extends westward and northward to the Grand Canyon of the Colorado River. Its surface is broken by volcanic mountains and deep canyons, but has in some places small forested areas and fertile valleys. The second division, the southern and western portions of Arizona, lies within the more distinctly arid region and slopes from the Colorado Plateau to an elevation in the southwest that is only a little above sea-level. This section of the Territory is crossed by low mountain ranges or dotted with steep volcanic cones, is without streams, and is usually lacking in vegetation. Between the mountains are hot, dry, barren plains, gradually ascending eastward. The mountains of the southeastern part of the Territory are higher and often covered with grasses and sturdy undergrowth. The extreme height of the mountain system of Arizona is attained in the San Francisco Mountains in Coconino County, the two highest peaks of which, San Francisco and Humphreys, attain an altitude of 12,794 and 12,562 feet respectively.

THE CAPITOL AT PHOENIX

Phoenix, the center of a fertile agricultural region, became the seat of the territorial government in 1889 by the removal of the legislative bodies from Prescott. Here in 1900 was completed a handsome territorial building.

Arizona has only two drainage systems, one in the valley of the Colorado River and the other in that of the Gila River. The Colorado River, which constitutes the boundary separating Arizona from California and Nevada, drains the northern half of the Territory. Of its tributaries the Little Colorado River is the most important. The southern portion of the Territory is drained by the Gila River.

Scenic Wonders. The natural scenery of Arizona is on a magnificent scale and greatly diversified, the most interesting feature being the Grand Canyon of the Colorado River, lying chiefly in Northwestern Arizona. Here, for a distance of 218 miles, the great river chisels its way through elevated plateaus that rise at various points 6,000 feet above its waters, the latter having had in this distance a total fall of 1,640 feet. On both sides of the Grand Canyon are far-stretching plateaus, also cut by deep canyons, some of which contain feeders of the Colorado River.

Other features of special scenic and scientific interest are the petrified forests, embracing several separate tracts, one of which, Chalcedony Park in Navajo County, is eight square miles in extent and contains countless numbers of large, petrified tree trunks, either whole or in segments. In the region surrounding Flagstaff are found interesting ruins of the ancient Cliff and Cave Dwellers, who probably belonged to the same stock as the Pueblo Indians of the present day.

Climate, Flora, and Fauna. In the less elevated southern and western portions of the Territory the climate is subtropical. At Prescott, which lies in about the center of the Territory, the mean annual temperature is 53°, while the cold in the higher altitudes at times interferes with outdoor life. The Territory is exceptional in the dryness of its air and the amount of sunshine. The precipitation is very light, and rain usually falls in heavy showers or cloudbursts during two distinct wet seasons, in December and in July and August.

Aside from the conifers of the forested areas, chiefly yellow pine, the flora of the Territory, especially of the southern and western sections, embraces many varieties of plants not found in other parts of the country. Grama-grass flourishes on the dry plains. The mesquit, having a remarkably hard fiber, produces good beans, provides fuel, and exudes a true gum arabic. The piñon, aloe, cactus, grease-wood, agave, and other species are characteristic of the Territory. The various animals found in Arizona render the Territory a well-known hunting ground. In the mountains deer, bears, mountain lions, and wild turkeys are numerous; while antelope roam the plains. Game-birds abound, and fish are found in all the streams.

VIEW IN THE MARBLE CANYON, COLORADO RIVER

Beginning at the Echo Cliffs, near the northern border of Arizona, is the Marble Canyon of the Colorado River. Here the stream, cutting into the earth, has left perpendicular walls with heights, which at first measuring only some 200 feet, gradually increase to several thousand feet. Below the Little Colorado River the Marble Canyon merges into the Grand Canyon, before whose magnificence the former's beauties pale, although surpassed by no other river gorge in the world.

Forests and Mines. The mountain regions of Arizona are heavily timbered. In the northern part of the Territory the pine forests are said to be the largest in the United States. Above the pine belts are large areas of firs and spruces. The National Government has created forest reserves covering most of the timbered area of the

Territory, and lumbering is carried on under the restrictions of Federal supervision.

Arizona is one of the richest mining sections of the United States. Copper is the chief metal in importance, the Arizona copper belt ranking next in its output to that of the Lake Superior region. Gold and silver are produced heavily, and some amount of lead also is sent to the smelters. Around Tombstone is a famous mining district. Bismuth and nickel are found in commercial quantities; while fluorspar, gypsum, and marble are also among the products of the Territory that have been placed on the market.

INDIAN WOMAN WEAVING A BASKET

In the ancient art of basket-weaving the Indians of Arizona have great skill. Interesting, indeed, is the process of basket making, as it is practiced by the women of the various Indian villages. Quaint designs and striking color schemes are originated and carried out by them in their works, those embodied in baskets designed for use in religious ceremonials being especially interesting.

Agriculture. In parts of Northern Arizona agriculture may be carried on to a limited extent without irrigation, but in the regions to the south the successful cultivation of cereals, vegetables, and fruits depends almost entirely upon the artificial application of moisture. The fertility of the soil under irrigation is shown by the remarkable variety of the crops obtained, those of greatest value being alfalfa, sorghum, and other forage crops, wheat, barley, potatoes, and other vegetables. Some corn and tobacco are grown. Horticulture is now well established, grapes and orchard fruits, including many subtropical varieties. being successfully cultivated. In the temperate climate of Northern Arizona peaches, grapes, and apples of fine flavor are raised; in the Salt River Valley apricots, grapes, lemons, and oranges are produced. The growing of figs, almonds, olives, and dates for commerce is in the experimental stage.

The live-stock industry holds a dominant position among agricultural pursuits. The value of the domestic animals on farms and ranges far exceeds the value of the land and its improvements, and the greatest farm income from any single source is derived from the sale of live animals. The dairy interests are also coming to be quite valuable as the increase of population opens wider markets for their products. Ostriches are raised near Phoenix.

Chief Cities. Tucson is the largest city and the leading financial center. It was formerly the territorial capital and is one of the oldest towns in the United States. The altitude of the city is a little more than 2,300 feet, and owing to the dry, clear atmosphere of the elevated valley in which it is situated, it has an established reputation as a winter health resort. The University of Arizona is located here.

Phoenix, the capital and second city in size, is admirably located in the Salt River Valley, of which it is the commercial center. It is the trade outlet of an irrigated area greater in extent than any other in Arizona, a region second to none in the Territory in its agricultural possibilities.

Prescott, the leading town in Central Arizona, is the outlet for the gold and silver product of that portion of the Territory. The town has a beautiful location among the mountains. Flagstaff, situated in the pine forests in the San Francisco Mountains, is a lumber market. Bisbee and Jerome are trade centers of rich copper-mining districts.

Historical. The region of which Arizona forms a part was first explored by the Spaniards under Coronado in 1540. In 1580 the Spaniards again entered this section, establishing a military post on the site of Tucson, together with presidios and pueblos farther south in the valley of the Santa Cruz. The Jesuits were especially active in founding missions, but there was unceasing conflict between the white settlers and Apache Indians. The Spaniards succeeded in holding the latter in check for a time, but later the Indians killed or drove away the inhabitants. By 1770 mines were deserted and missions in ruins. As early as 1824 the trappers who roamed in the Rocky Mountains entered Arizona from the north. In 1849 Americans first engaged in stock-raising along the Gila River. By the Mexican treaties of 1848 and 1853 the entire region was ceded to the United States and Arizona became a part of New Mexico, until 1863, when it was organized as a Territory.

VIEW OF A FRUIT FARM IN THE FERTILE SALT RIVER VALLEY, NEAR PHOENIX

The Salt River Valley is a great basin comprising extended areas of tillable soil that lack of water has hampered in natural development. Now, however, irrigation is doing its marvelous work, and the former desolate wastes are being parcelled out into prolific fruit-growing and beet-raising farms. Close climatic similarity to Persia and Egypt indicates the natural trend of agricultural development in the irrigable regions of Arizona. Here, as in the Old World, great crops of dates, figs, olives, and other semi-tropic fruits will be grown in the future.

UTAH AND NEVADA

UTAH

UTAH, as originally organized as a territory, from the domain acquired by the United States from Mexico, included all of the region between the parallels of 37° and 42° N. lying west of the summit of the Rocky Mountains and east of California; this area was reduced from time to time, the present limits being established in 1866. Of the total area of 84,970 square miles only 2,780 square miles are comprised in the water surface. The population is not distributed uniformly over the territory, but is grouped in a comparatively few favored localities. About one-fifth of the population is of foreign birth.

Physiography. Utah belongs to the great plateau of the Rocky Mountains and comprises one of the most elevated districts in the United States, nearly all of its area lying above 4,000 feet. Throughout the whole State the surface is extremely varied. The Wasatch Mountains enter Utah from the north and divide it into two almost equal parts. In the southern portion of the State this range becomes a series of plateaus from 4,000 to 11,000 feet high. In the northeast are the Uinta Mountains, the highest range in the State. The culminating peaks are Gilbert (13,684 feet) and Emmons (13,624 feet).

TEMPORARY CAPITOL.

Salt Lake City, the center of Mormon authority, became the logical capital of Utah when the Territory was organized in 1851. The City and County Building at the present time contains the various State offices.

The eastern portion of the State is a series of vast plateaus drained by the Colorado River and its tributaries, the Green and Grand rivers. The Green, the head stream of the Colorado, rises in Wyoming; the Grand, the great eastern branch, has its source in Grand Lake in Middle Park, Colorado. These rivers and their branches flow through deep and precipitous canyons far below the surface of the plateaus. The Colorado continues its course through the State in a southwesterly direction through a series of canyons which become successively deeper until, after passing beyond the bounds of Utah, the Grand Canyon, in Arizona, is reached.

The portion of Utah west of the Wasatch Mountains forms part of the Great Interior Basin of North America, containing Great Salt Lake, which is eighty miles in length and from twenty-five to fifty miles in width. This vast basin is drained to neither ocean. West of Great Salt Lake is the stretch of country known as the Great Salt Lake Desert, an alkali surface almost without vegetation, one of the most arid districts in the United States. About 100 miles southwest of Great Salt Lake is the Sevier Desert, containing the basin of Sevier Lake.

SCENERY AT GARFIELD BEACH, GREAT SALT LAKE

The coast scenery of the Great Salt Lake is continually changing as the level of the lake rises and falls. At Garfield Beach, formerly the leading bathing resort on the lake, the huge form of Black Rock at one time rose above the surface at some distance from the shore. The waters have since receded, leaving the Rock to mark the edge of the advancing shore line.

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THE MORMON TEMPLE, SALT LAKE CITY

A magnificent temple, dedicated to the sacred rites of the Mormon faith, rears its six great towers above the roofs of Salt Lake City. Spacious grounds lie all around it. To those not of the Mormon belief much mystery surrounds the great fane, whose inner chambers, said to be of surpassing beauty, are never opened to any person outside the fold of the Church.

Climate, Flora, and Fauna. The climate of Utah exhibits a range corresponding in extent to that of the relief in the State, the mean annual temperature ranging from 65° in the extreme southwestern part of the State to below the freezing point on the summits of the highest mountains. In the Great Salt Lake Valley and on the lower plateaus of the Colorado River and its tributaries the mean annual temperature ranges from 50° to 55°; in the Uinta Valley it is lower, ranging from 45° to 50°. The rainfall likewise presents a wide variation throughout the State. Upon the higher elevations of the Wasatch and Uinta mountains the precipitation during the year is considerable, while in the low country of the State it is so slight that irrigation is necessary to agriculture.

Owing to the wide range of topography Utah has a varied flora. The large number of species includes many beautiful plants ranging in character from those of the frigid regions to those of the semi-tropical. The characteristic trees of the mountains and more elevated plateaus are conifers and aspens, while on the foothills scrub-oaks abound and on the plains and the more arid hills are found piñon pine, with *Artemisia* (sage-brush), grease-wood, cacti, and yucca. Forest growth, however, is notably deficient.

Animal life is also exceedingly varied in Utah, but through insufficient protection some of the most valuable of the large game animals, such as the elk, mule-deer, antelope, and mountain-sheep, are now seldom seen, being found only in the most inaccessible mountain regions or in the less frequented parts of the desert. Game-birds also are rapidly disappearing, although grouse and ducks may be found. The mountain lakes and streams abound in trout and other food fish.

THE RED NARROWS, WASATCH MOUNTAINS

East of Utah Lake lie the valleys of the Wasatch range, through which flow intermittent streams tributary to the lake. Amid the mountains is the Red Narrows, a minor canyon traversed by a railway line and a wagon road. Bold cliffs tower far above the highway, half-screened by verdure, but through the foliage gleams the red rock strata from which the defile acquires its name.

THE TEMPLE AT LOGAN

Several of the more important towns outside of Salt Lake City have large temples devoted to Mormon rites of worship. That at Logan, with its great buttresses, is exceedingly striking in appearance, resembling the battlemented castles of old European cities.

Agriculture. Agriculture is the great industry of the State. The Cache Valley is an elevated district where all of the hardier cereals, fruits, and vegetables flourish. In the valleys southward to about the parallel of 39° all of the products of the temperate zone may be grown, the yield of fruits and grains being abundant. Virgin Valley, in Washington County, has a semi-tropical climate, and here not only the products of the temperate zone but almonds, figs, pomegranates, and cotton are cultivated. Irrigation has been practiced in Utah since the earliest Mormon settlement and has been a most important factor in the reclamation of the arid districts. The chief crops of the State are hay, wheat, oats, corn, and potatoes. Sugar-beet culture is very successful. Horticulture has made great advances in the northwestern counties of the State. The mulberry tree flourishes in Utah, and the climate being admirably adapted to silk culture, encouraged by State bounties, the industry has been successfully established in certain sections.

The live-stock interests of Utah are important; sheep, cattle, and horses are raised in large numbers and considerable attention has been given to the improvement of the breeds. Sheep are raised in all agricultural districts and the State has shown for many years a large annual wool clip.

Mines and Manufactures. Minerals abound in Utah, chief among which are the precious metals, lead, and copper. The mines are situated almost entirely in the Wasatch Mountains, southeast of Salt Lake City, and in the Mercur district. Silver was discovered in 1857 and Utah now stands third in the ranks of the silver-producing States. The State has also large outputs of gold, copper, and lead. Bituminous coal is mined extensively from the deposits in Carbon County.

Good coking coal and valuable deposits of iron ore have been found in Iron County. Salt is manufactured from deposits of rock-salt near Virgin River, in the southwest, and from the waters of Great Salt Lake and many smaller lakes and springs. Among other minerals are extensive deposits of sulphur of excellent quality; gilsonite, of which inexhaustible deposits are found in the Uinta and Uncompahgre reservations, and large stores of antimony. Pottery fire, and porcelain clays exist, and among valuable building stones are included limestone, granite, and sandstone.

Although the agricultural interests of Utah are preëminent, the increase in the manufacturing and mechanical industries of the State is rapid. For the market beyond the State the smelting and refining of lead ore constitutes by far the most important manufacturing industry. Among other important industrial establishments are flouring and grist mills, cheese and butter and beet-root sugar and molasses factories, canneries for fruit and vegetables, clothing,

THE VALLEY OF THE WEBER, NEAR PETERSON

One of the most important tributaries of the Great Salt Lake is the Weber River, whose canyon is distinguished for remarkable scenery. Above the canyon the valley of the river is enclosed by low mountains, beyond which may be seen the snow-covered heights of the more elevated peaks of the Wasatch range. An attractive view is found near Peterson, where a curve in the valley affords a glimpse of Cottonwood Mountain in the distance.

and boot and shoe manufactories. Woolen-mills are located in Salt Lake City, Ogden, and a number of the smaller towns, but the most important are the mills at Provo, these being the pioneer manufacturing establishments in the State.

Chief Towns. Salt Lake City, the capital and largest city of Utah, was founded by the Mormons in 1847. It is situated on the right bank of the Jordan River in one of the most fertile valleys of the State. The city is surrounded by fine scenery and is attractively laid out with broad streets and large squares, the streets bordered by streams of running water, and everywhere a profusion of shade-trees. The University of Utah is located at Salt Lake City. The most notable buildings of the city, however, are the Temple and the Tabernacle of the Mormon church.

Ogden, the second city in size and commercial importance in the State, has an elevation of 4,300 feet, being situated on a plateau environed by mountains. It is well and tastefully built and has a delightful climate. Ogden is an important railway center and is the seat of numerous manufactures of growing importance. Provo is situated on Provo River near the east shore of Utah Lake, its site being 4,500 feet above sea-level, in the midst of scenery of unusual beauty. East of the city are Provo Peaks, with an altitude of 11,000 feet. It is a thriving industrial center.

STREET SCENE IN PROVO

Provo is picturesquely situated on the Provo River at the base of the Wasatch Mountains, whose nearest peaks cast their shadows over the city. It is notable as the site of several great industrial plants, conducted under the auspices of the Mormon church. The streets of Provo are wide, and lined with shade trees, and there are a large number of handsome residences.

Among other flourishing towns are Logan, in one of the most fruitful valleys of the State, seat of the State Agricultural College and of the State Experimental Farm; Park City, a prosperous mining town in one of the most important mineral fields in the State; Springville, midway between the iron and coal fields of Utah County, with great possibilities as a manufacturing center; and Eureka, the largest town and principal trade outlet of the Tintic mining district, one of the richest mineral regions in Utah. Of the minor places Brigham, Spanish Fork, and Lehi may be noted as agricultural and industrial centers, the latter having one of the largest beet-sugar plants in the country. American Fork, in Utah County, twenty-eight miles southeast of Salt Lake City, is near rich mines.

Historical. It is asserted that in 1540 Cardenas reached the banks of the Colorado River in territory now within the boundaries of Utah, and doubtless this region was visited by Spaniards at a very early date; but the earliest recorded exploration was that made by the Franciscan fathers, Escalante and Dominguez, in 1776–77, from Santa Fé to the Great Salt Lake. About 1846 Brigham Young, who became the head of the Mormon church after the death of Joseph Smith, conceived the idea of emigrating with his people to the remote West and settling in Mexican territory beyond the jurisdiction of the United States. In the summer of 1847, with a company of pioneers he visited the Salt Lake Valley and, deciding to settle there, he conducted the main body of his followers to Utah. By the time they had become settled, however, the Mexican War had been fought and the territory they had occupied was a part of the United States.

In 1849 the Mormons organized the State of Deseret, but Congress refused it recognition, and in 1850 Utah Territory was created and Brigham Young appointed Governor Out of this appointment grew many disturbances, and after the Mountain Meadow massacre in 1857 an expedition of United States troops was sent to the Territory. At that time the Mormons constituted almost the entire population of Utah, but in 1863 the discovery of gold, followed by the building of the Pacific Railroad, led to a great influx of non-Mormons. Many unsuccessful attempts were made to secure statehood, but the existence of polygamous practices in the Mormon church defeated all efforts until the heads of the church directed the abandonment of the objectionable customs. Thereafter an enabling act passed Congress under which, in 1896, Utah became a State.

ROUNDING PULPIT ROCK, IN ECHO CANYON

Crossing the State line between Wyoming and Utah is Echo Canyon, a defile extending some thirty miles along Echo Creek and exhibiting a series of wonderful scenic effects. Pulpit Rock is a huge stone, its shape rudely suggesting the form of a church pulpit. Tradition says that in 1847 the Mormon pioneers of Utah passed here on their way toward Salt Lake, and that their leader, Brigham Young, mounting Pulpit Rock, preached from it a sermon, the first delivered on Utah soil. One of the great railway lines now extends the length of the canyon.

NEVADA

Nevada is the fourth largest State in the Union, having an area of 110,700 square miles, of which 960 square miles are water surface. Its inhabitants are few and scattered. In 1880 Nevada had a population of more than 60,000, through the growth of the mining industry, but it has since lost heavily, owing to the falling off of that industry. The proportion of persons of foreign birth in the population is about one-quarter. Immigration from other States is small.

Physiography. Nevada lies almost entirely within the vast arid table-land known as the Great Basin, which has a general elevation ranging from 4,000 to 5,000 feet above sea-level. The mountain ranges within this basin, rising from 1,000 to 9,000 feet above the general level, consist of long, narrow ridges, trending in general north and south, and separated by valleys or plains that are often absolute deserts. The Great Basin is one of interior drainage. No streams rising within its boundaries carry their waters directly to the ocean, and most of the rivers in Nevada are either absorbed by the sands of the desert or terminate in some saline or alkaline lake. The Truckee, one of the best known rivers, flows from Lake Tahoe into Pyramid Lake. The Humboldt, more important because its valley forms a highway of commerce, crosses the northern regions of the State. During the winter months a considerable area in the State is covered with bodies of shallow water called playas or mud lakes. The waters of these lakes are of a greenish-yellow color and are usually evaporated during the excessive heat of the summer months, leaving hard, smooth bottoms called mud plains or playas.

PALISADE CANYON, ON HUMBOLDT RIVER

In Eastern Nevada a group of rugged mountain ranges extends north and south across the country, shaping the watercourses to nearly parallel lines. Westward across the trend of these ranges the Humboldt River cuts its way, breaking through the most formidable of its barriers at a great mountain cleft called the Palisade Canyon.

The climate of Nevada is characterized by a dry, pure atmosphere, with a temperature varying with different localities. In the basin of the Virgin River and the region west of that stream the climate is semi-tropical, but owing to the dryness of the air the heat is not especially oppressive. Precipitation is slight throughout the State, varying with the altitude and being greatest in the mountains. Owing to the aridity of the State the flora is insignificant. The only forested area of any considerable extent is in the Sierra Nevada Mountains, which are clothed with conifers, chiefly dwarf pines. The natural vegetation of the plains consists chiefly of sand-grass, sage, and cacti. The hare, coyote, and wolf are the principal wild animals of Nevada.

Resources and Industries. Mining and agriculture are the leading industries of Nevada. The State is essentially a mining region, and its early prosperity was due to its mineral resources, which proved to be especially valuable. The "bonanza mines" of Virginia City and Gold Hill yielded by far the greater part of the vast output of gold and silver which made Nevada famous throughout the world Deposits of copper lead, and antimony occur and the mines are being developed to a considerable extent, while iron ore, tungsten, and nickel have been discovered. The nickel deposits are worked in Churchill County. Sulphur, salt, borax, soda, coal, and gypsum exist.

Wheat, barley, and alfalfa are the leading agricultural products, and in some of the valleys in the western counties potatoes are raised extensively. The sugar-beet also is grown. Soil and climate are favorable to the cereals, vegetables, and fruits of the temperate zone but the future prosperity of agriculture in Nevada depends upon irrigation and this work is now attracting much attention. The principal irrigated areas are along the Humboldt River and in the lowlands traversed by the Truckee, Carson, and Walker rivers.

THE CAPITOL AT CARSON CITY

Nevada was organized as a Territory in 1861, and in the same year Carson City was selected as the capital. The Capitol, begun in 1870, was completed for occupation in the following year.

With the completion of the Truckee-Carson irrigation plans, approximately 375,000 acres of land will be brought under irrigation in that district alone.

The live-stock industry is the main feature of Nevada farming interests, tillage being subordinate to it. Large areas are given over to grazing purposes. The raising of sheep especially has developed to great proportions. The manufacturing industries of Nevada consist chiefly in the production of articles for local consumption.

Chief Towns. Reno is situated on the Truckee River in the midst of a prosperous agricultural district. The manufacturing industry here has attained fair proportions and includes many establishments, among them a large creamery, the first established in the State. The State University is located at Reno.

Virginia City is located among rocky ledges and ravines on the eastern slope of Mount Davidson at an elevation of 6,200 feet above the level of the sea. It is one of the rich mining centers of the country and its prosperity is due to the wealth of its silver mines.

Carson City, the State capital, situated in the vicinity of rich gold and silver deposits, and also the center of an agricultural region, has a picturesque location at the base of lofty mountains. The United States Mint is located here.

Historical. The region now embraced in the State of Nevada was traversed by Frémont in 1843–44 and again in 1845, but the first settlements were made by the Mormons in 1848 in the western valleys near the present sites of Genoa and Carson City. In 1848 the entire region was ceded by Mexico to the United States, but it was not until 1859, upon the discovery of silver, that there began any steady growth in population. Within two years thereafter the number of inhabitants had increased sixteenfold. In March, 1861, Nevada Territory was organized. By March, 1864, a State constitution had been framed and ratified by the people and Nevada became a member of the Union by proclamation of the President.

CALIFORNIA

CALIFORNIA comprises an area of 158,360 square miles, of which 2,380 square miles is water surface. The population of the State has now a steady growth based upon immigration from the more eastern commonwealths. The foreign-born element numbers about one-fourth of the aggregate. Of this class the Chinese form a large part, but their numbers are gradually decreasing under the operation of the Chinese exclusion law. The Indians of the State occupy several small reservations.

Mountains. Two great ranges of mountains run in nearly parallel lines from northwest to southeast for almost the entire length of the State. These are the Sierra Nevada (Snowy Range) and the Coast Range. The former diverges from the latter near the Tejon Pass, then sweeping northwestward it again unites with the Coast Range by a transverse series of lofty elevations dominated by Mount Shasta, 14,380 feet high. Of the two ranges, the higher and more rugged is the Sierra Nevada, whose summit is in general above the limit of perpetual snow. From the western slope the Sierra sends off numerous spurs into the interior valley. Among these lies the great gold region discovered in 1848. Mount Whitney attains an elevation of 14,898 feet, being surrounded by several peaks not less than 13,000 feet high. The Coast Range skirts the Pacific Coast, forming an immense rock-bound barrier from the north to the neighborhood of the Tejon Pass; thence it trends southeastward. Between the Coast Range and the ocean are numerous minor ranges and isolated hills bordered by a succession of valleys which are notable for rare beauty and fertility.

Between the Sierra Nevada and Coast ranges lies the great intermontane basin comprising the Sacramento and San Joaquin valleys, presenting many evidences of having been at one time the bed of a vast lake. Portions of California abound in wild and romantic scenery, the most remarkable locality being the Yosemite Valley, on the western slope of the Sierra Nevada. The valley is nearly level, is about six miles long and from half a mile to a mile wide, and is enclosed within almost perpendicular granite walls towering to a height of 3,000 to 6,000 feet. Yosemite Creek, its borders beautified by a profusion of flowering plants and stately trees, winds beneath the cliffs and plunges over a precipice in a vertical fall of 1,500 feet, issuing in a series of cascades and ending in a final leap of 400 feet. In 1864 the valley was granted by the national government to the State of California as a permanent public park.

THE CAPITOL AT SACRAMENTO

The city of Sacramento was established in the early period of California's history and was a depot for immigration from the East as well as a supply point for an extensive mining region. When the State Legislature sought to secure a permanent location for the capital the city entered the contest for the honor, winning its object by donating the use of its fine court-house. In 1854, accordingly, it became the seat of government. The present Capitol, first occupied in 1869, is very finely located.

MODERN HOTEL CORRIDOR, PASADENA

The mission style of architecture has become one of the favorite forms of expression of structural art in the larger modern buildings of Southern California. Copied from the modified Spanish style used by the designers of early mission buildings, it lends itself with peculiar appropriateness to the climatic conditions of the country and to the demands of artistic taste.

OLD MISSION CHURCH, MONTEREY

Within the limits of a flourishing modern city stands a venerable church erected in 1794 in connection with an Indian mission. Its architecture is Spanish in style, and its white stone walls are weather-worn with age. The great carved altar is the product of some Indian convert's skill a century ago, and the altar service of solid silver also shows the work of tireless devotees.

Rivers and Lakes. The chief rivers of California are the Sacramento and the San Joaquin, the former about 370 miles and the latter about 350 miles in length. These rivers drain the whole of the central basin of the State. The Sacramento River has its head springs in

Mount Shasta, and the San Joaquin rises in the Sierra Nevada Mountains. The two streams flow toward each other and unite; then they turn sharply to the westward and flow into the deep inlet known as Suisun Bay. Both are navigable for nearly 140 miles, and at high water for a greater distance. The Kern in the south, the Klamath in the northwest, and the Salinas are also streams of some importance.

Mountain lakes are numerous in California. Of these the most famous is Lake Tahoe, lying at the east base of the Sierra, partly in Nevada. It has an elevation of about 6,200 feet, is about twenty miles in length, with a depth of 1,645 feet, and its waters are characterized by great purity. Lake Mono has bitter waters saturated with various mineral substances and of so high a specific gravity that the human body will float in it. No fishes exist in its waters, and it is sometimes called the Dead Sea of California.

THE VERNAL FALLS

Through the beautiful valley of the Yosemite rushes a crystal torrent that leaps over successive terraces in splendid cataracts. The Vernal Falls is but one of these cascades. Falling from a height of 336 feet, its misty form is visible a great distance down the valley, and is one of the notable features of the famous park.

Climate, Flora, and Fauna. The climate of California, particularly in the great citrus belt, is more equable than its latitude would indicate, owing to the ameliorating influence of the Japan Current. Occasionally a frost severe enough to injure crops occurs, but practically winter is unknown. The average range of temperature is from 53° to 62°, that of the coldest month varying from 43° in the northern portion of the Sacramento Valley to 53° at Santa Barbara. The rainy season lasts from November to April.

The flora of California is unusually rich and varied. The mountainous regions are heavily timbered with a variety of evergreen and deciduous trees. Most remarkable of the evergreens is the gigantic sequoia of the Yosemite Valley, which has been known to attain a height of 450 feet and a circumference of nearly 120 feet. Allied to this is the redwood of the northwest, invaluable as a timber tree.

Among the fauna of the State are the grizzly bear, the puma or mountain lion, and the bighorn or mountain sheep, also various species of deer, fox, and wolf, numerous rodents, and a large number of birds, among them the ground-cuckoo and California quail. On the islands and on the coast the otter and seal, with the so-called sea lion, are found.

Natural Resources. Classified according to the principal sources of farm incomes, the leading branches of agriculture in the order of their importance are the cultivation of hay and grain, fruit culture, the raising of live stock, dairying, and the growing of vegetables. Among miscellaneous crops the growing of hops rapidly is becoming important. The principal source of income on many farms is live stock, but dairying is becoming important, while poultry-raising and the production of honey are steadily increasing.

THE THREE BROTHERS, YOSEMITE PARK

Three stately peaks, partly separated from one another by gigantic clefts in the massive rock, riven in some titanic convulsion of Nature, look calmly down upon the smiling valley of the famous Yosemite. Over the rugged sides of their bulky forms vegetation has advanced year by year until the highest summits have been scaled and a straggling forest growth clings to the towering heights.

THE HOME OF SENORITA RAMONA

Camulos Ranch, the home of Ramona, the heroine in one of the best known of American novels, is represented by an old Spanish house that stands, unchanged by time, in the Santa Clara Valley of Southern California. It is an adobe structure with a wealth of veranda space, the plain walls pierced by barred and shuttered windows and partly screened by flowering shrubs. Few of these old-time houses now remain north of the Mexican border.

Favorable climatic conditions assure to California preeminence as a fruit-growing State. All fruits common to the temperate zone and a large variety of semi-tropical fruits are produced in the greatest profusion. Plums, peaches, apples, prunes, apricots, and pears are grown in abundance. The number of semi-tropical fruit trees, as oranges, olives, and lemons, has increased enormously. Orange groves are chiefly in the southern counties. Olives are cultivated in the more extreme southern counties, and pomeloes are now grown in more than half the counties of the State. Of the Vineyard products about one-half are raisin grapes.

The great mineral resources of California justly entitle the State to be considered one of the richest mineral regions

AVALON, CATALINA ISLAND

Twenty miles from the California coast lies the mountainous Catalina Island. Nearly everywhere its cliffs rise abruptly from the sea, but on the east side is a pretty cove with a pebbly beach, and here is Avalon, one of California's famous pleasure resorts, nestling in luxuriant foliage and girdled by steep hills.

THE HARBOR OF SAN PEDRO

For a long time the city of San Pedro has been an outlet to the ocean for the fruit products of the Los Angeles valley, but of late it has taken on a much greater commercial importance. Congress, in appropriating $3,000,000 for a stone breakwater and $1,000,000 more for dredging the harbor, has fixed its future as a deep-water seaport of the country, with advantages rivaling those of San Francisco and more northern ports. Already is the harbor spoken of as "The Gateway of the Great Southwest."

in the world. The gold output, with which the history of the State is closely identified, has fluctuated with succeeding years, but the output of copper has increased steadily, California ranking fourth among the copper-producing States. Next in importance is the production of quicksilver from cinnabar, which is most abundant in the Coast Range. The most productive oil district is Los Angeles. Lighter oil is found in Fresno County and near Bakersfield in Kern County. Other mineral riches of the State include silver, lead, antimony, borax, cement, coal, asphaltum, manganese, natural gas, platinum, salt, and soda.

Manufactures. Owing to the fact that San Francisco is a convenient port for the entry of raw sugar from Hawaii, the refining of raw sugar and molasses outranks all other industries in the State. The State is first in the Union in the production of beet-root sugar. The business of slaughtering and meat-packing has greatly increased in recent years. Third in importance is the lumber industry, which is largely confined to the district north of Fresno County and west of the Sierra Nevada Mountain range. Shipbuilding is also well established. California, the greatest grape-growing region of the United States, easily leads in the production of vinous liquors. The mills of the State supply flour for local consumption and furnish large quantities for export to other countries. The canning and preserving of fruits has had a steady and constantly increasing growth. The fruits most extensively canned are plums, pears, peaches, apricots, and cherries; among the vegetables are tomatoes, peas, and asparagus. The preparation of figs and olives for the market is increasing yearly in quantity and value.

Cities. San Francisco is the commercial metropolis of the Pacific Coast and one of the leading seaports of the country, as well as a manufacturing center. Sacramento, the capital city, is a railway and industrial center of considerable importance, ranking third among the manufacturing towns. Los Angeles is the chief railway center and largest city of Southern California and the general distributing point for the citrus fruits grown in the State. Oakland, on the east shore of San Francisco Bay, is a favorite residential city. San José, in the heart of the far-famed Santa Clara Valley, is in a district that excels in the production of grain and fruits, some of the finest vineyards of California lying in the vicinity. San Diego has a land-locked harbor and is a prominent port. Stockton, at the head of tide navigation on the San Joaquin River, is one of the most important interior wheat and flour markets of the Pacific Coast. Pasadena is a notable winter resort in the San Gabriel Valley.

Historical. The present State of California was visited by Cabrillo in 1542. In 1769 a company of Franciscans planted colonies at San Diego and in 1776 they established the Mission Dolores at San Francisco. Upon the liberation of Mexico from the Spanish yoke in 1822, Mexican and Spanish immigrants appeared. During the Mexican War, in 1846, Commodores Sloat and Stockton occupied the coast and their conquest was sustained by the Federal Government. The treaty with Mexico gave the region to the United States. After the discovery of gold in 1848 a tide of immigration from the Eastern States began to set toward the new "El Dorado." No established government existed, and a reign of terror ensued. For the furtherance of order a constitution was framed and submitted to the General Government and California was admitted into the Union in 1850.

MINING FOR GOLD BY THE HYDRAULIC METHOD

Tiny flakes of golden wealth lie mingled with the clays and gravels of the alluvial valleys of California. Where the flakes lie thickly enough the placer miner sifts the surface soil with patient industry, but the deeper treasure falls to the capitalist, who erects great flumes and pipes, turning forth the power of massed water upon the soil wherein lies the gold. Under the impact of the gathered stream tons of earth are swept into the sluiceways, and here the heavier particles of precious metal drop to the bottom while the lighter material is borne onward and away by the force of the water.

OREGON

OREGON, one of the Pacific States, has an area estimated at 96,030 square miles, of which 94,560 miles are land surface and 1 470 miles are water surface. Its coast line at the west is about 300 miles long and is marked by many bold promontories and points formed by spurs of the coast range. Of the population of the State about 16 per cent is foreign-born, and a small portion is of Chinese, Japanese, or Indian origin.

Mountain Ranges. Oregon is divided into two very dissimilar sections, lying east and west respectively of the range of the Cascade Mountains. This range traverses the entire State from Washington to California, having an average elevation of 4,000 to 10,000 feet. The highest of its eminences are Mount Hood (11,225 feet), Mount Pitt (9,760 feet), and Mount Jefferson (10,200 feet). All these peaks are extinct volcanoes, rising to the region of perpetual snow. From the main range outliers project westward. West of the Cascade Mountains and parallel to the seashore is the Coast Range, with spurs reaching to the sea.

Eastern Oregon consists of a generally undulating table-land cut by deep canyons, and marked by low, truncated peaks. In the northeast it is traversed by the Blue Mountains, with an average altitude of about 7,000 feet. From this range extend spurs, among them the Eagle Creek and Powder River mountains. In the south central part of the State, east of the Cascade Mountains, is an extensive and almost rainless region known as the Sage Plains. This region is a portion of the Great Basin, which includes also parts of Nevada and Utah. This basin is largely an arid waste of volcanic soil, where the rivers, flowing from the mountains, disappear in dry or marshy plains. In the heart of this almost desert region the surface is broken by the range of the Steins Mountains extending north and south, and between them are mud lakes or playas, that, as in Nevada, are caused by evaporation of the waters of the lakes and streams.

THE CAPITOL AT SALEM

The seat of government for Oregon was removed to Salem from Oregon City in 1851, a legislative vote deciding its location after a warm contest between friends of the rival towns. The Capitol, completed sufficiently for occupation in 1875, is a commodious edifice.

CELILO FALLS, IN THE COLUMBIA RIVER

Above the famous Dalles of the Columbia begins the narrowing of the great river between giant barriers, and here it breaks away from its easy flow to plunge over rocky terraces and inclines. The Celilo Falls, some thirty feet in height, extend a mile or more diagonally across the river and are overshadowed by lofty bluffs rising perpendicularly. The great expanse of tumultous river, the sombre heights above, and the roaring cataract form here a memorable picture.

Hydrography. The Columbia River forms the northern boundary of the State for about 300 miles and, except where obstructed by the Dalles in Wasco County, is practically navigable from its mouth to the point at which it enters the State, canals being used to pass around the rapids at the Cascades. The Dalles are passed by a railway, and above the gorge the stream is navigable for steamers to Priest Rapids in Washington, a distance of 198 miles. Of all the physical features of Oregon none can compare in grandeur with the Cascades and the Dalles of the Columbia River At the Cascades, located about 150 miles from the mouth of the stream, the river descends 300 feet in a canyon 4 000 feet deep and nearly six miles long, cut through the lava beds of the Cascade Mountains. At the Dalles, fifty miles above the Cascades, the river is forced into a channel about thirteen miles long and 175 feet wide

The chief tributary of the Columbia River west of the Cascade Range is the Willamette River, which joins the Columbia River 110 miles from its mouth and is navigable for large ships to Portland. East of the Cascade Mountains the Columbia receives the Deschutes River, 250 miles long, and the John Day River. The Snake River, which forms part of the eastern boundary of Oregon, is also an affluent of the Columbia. The Umpqua River and Rogue River are important rivers flowing through fertile valleys. Among the lakes of Oregon, those of Klamath and Lake counties are famous for their beauty.

Climate, Flora, and Fauna. The southern boundary of Oregon is farther north than Chicago and its northern limits are in the same latitude as Central Maine, while the prevailing temperature in large

MULTNOMAH FALLS, NEAR THE COLUMBIA

A little below the Cascade Locks, on the Oregon side of the Columbia River, is a series of attractive waterfalls dropping hundreds of feet straight down the face of a precipice into secluded pools. Of these cataracts, Multnomah Falls, merely a narrow ribbon of water but said to be 800 feet in height, is the most celebrated.

portions is similar to that of Virginia. The mildness of the climate is due partly to the fact that most of the winds on the coast blow from the southwest and the warm Japan Current, crossing the Northern Pacific Ocean, is forced southward along the American coast, carrying a large body of heated water, that makes its influence felt far within the interior. However, there are extreme variations in temperature in Oregon, due to differences in altitude. The average annual temperature varies from 40° to 56°, the mean for the State being about 50°. On the coast the seasons are distinguished as the wet and the dry rather than as winter and summer.

The flora of Oregon is exceedingly rich; it includes more than 140 varieties of native grasses; the principal trees on the mountains are pines, spruces, and other conifers, and in the valleys cottonwood, maple, ash, dogwood, and wild cherry. Since the occupation of the State by civilized inhabitants the grizzly, black, and cinnamon bears, gray wolf, deer, antelope, elk, and mountain-sheep either have been exterminated or have retreated from the settlements to the hills and mountains. Fur-bearing animals are numerous, and birds include many varieties. The streams of the State abound in fish.

Natural Resources. Western Oregon contains the greater area of developed farming lands, but Eastern Oregon offers the larger field for irrigation. In the western section especially in the valleys of the Willamette, Umpqua, and Rogue rivers, the surface is covered with a rich, dark loam. On the mountain slopes the soil is heavier and the country better adapted to grazing. Eastern Oregon, on the other hand, has in general a sandy soil, containing much alkali but very fertile under irrigation. Extensive areas of naturally fertile wheat lands occur in the northeast and the Grande Ronde Valley is a sugar-beet district, but in the southeast the country is devoted chiefly to

ON A ROCK-BOUND COAST

Some portions of the coast of Oregon present scenes of picturesque beauty, especially where the shore line is marked by small cliffs and forelands. At these points small islets of rugged rock, lying off-shore in the tidal waters, often constitute a serious danger to navigation.

MOUNTAIN CLIMBERS ON THE SLOPES OF MOUNT HOOD

Mount Hood can be ascended by inexperienced mountain climbers with little danger, and every summer scores of tourists triumphantly scale its icy heights, aided by guides who know the paths. The start is usually made from one of the hotels on the mountain side. About 900 feet below the summit the rope-line begins, and for some distance the pick and alpenstock are in constant use. The progress of a party across the ice-slopes is a picturesque sight.

grazing purposes. In the western part of the State the leading farm crops are wheat, oats, hay and other forage, and potatoes. The southern counties are excellent fruit-growing sections. Apples, peaches, pears, prunes, and grapes are grown. Hop culture flourishes. The Willamette Valley is a dairying region.

In Western Oregon, with its heavy rainfall and modified temperature, irrigation has been found necessary only upon some of the hay farms of the southern counties, and occasionally on truck or orchard farms. In Eastern Oregon, on the other hand except in the counties along the Columbia River, the greater part of the territory can be used for grazing alone, unless some form of irrigation is used. The irrigation systems of the State in general are inexpensive and are operated chiefly by individual farmers for their own use.

The mountain regions of Oregon are heavily timbered, and the Douglas fir and Oregon yellow pine contribute greatly to the wealth of the State. The

A SALMON BOAT IN THE FISHING SEASON

The Columbia and other rivers of the upper Pacific Coast are the breeding ground of the salmon, the habitat of which at other times is the ocean. In the months of September and October, when the waters of the Columbia swarm with salmon seeking their way inland, the fishing boats go out with wheel and net. It is the harvest time of the canneries, which become busy when the laden boats reach the wharves again.

Cascade Forest Reserve in Oregon is one of the largest in the United States. The fisheries of Oregon in the Columbia and at points on the coast are valuable.

The mineral resources of the State comprise gold, silver, iron, copper, chromium, platinum, iridium, nickel, zinc, cinnabar, lead, antimony, lignite coal, asphaltum, limestone, marble, and sandstone, the output of the gold mines considerably exceeding those of any others in aggregate value, the productive field being around the Blue Mountains. Coal is mined chiefly in Coos County.

WIZARD ISLAND, FROM ACROSS CRATER LAKE

In the crater of an ancient volcano is Crater Lake, one of the wonders of America. From its bottom rises a volcanic cone, towering 845 feet above the surface. This is Wizard Island. Its impressiveness, however, almost disappears when, viewed from across the lake, it is silhouetted against the gigantic rampart of Llao Rock, a cliff 2,000 feet high.

Manufactures and Trade. The great natural resources of Oregon in supplies of raw material, fuel, and water power, with the abundant facilities for distribution afforded by good harbors on the coast, and the increasing railway system of the State are conditions that have greatly fostered the development of manufacturing industries in recent years. Chief among the manufacturing establishments are the mills and factories devoted to lumber and timber products. Hundreds of saw-mills are scattered over the State in the timbered regions, and in the larger towns are establishments devoted to the turning of rough lumber into finished material. Ship and boat building is carried on at a number of points in the State. For the making of food products are mills devoted to flour manufacture, packing houses for meats, and canneries of fish. Paper and pulp mills have been established as well as woolen mills and manufactories of leather goods. Lumber, wheat, and flour constitute the exports of the State, and its markets are found in China, Japan, Hawaii, Mexico, and South America. The shipment of flour to Asiatic ports is growing to large proportions.

Chief Cities. Portland is the principal seaport of the State and the chief manufacturing, railway, and commercial center. It is situated on the Willamette River and is a distributing point for the products of Oregon, and to some extent also of those of Washington, Idaho, and Montana. It is the terminus of transcontinental railway lines and of steamships engaged in trans-Pacific trade. For manufacturing purposes an abundant water-power is furnished by the falls of the Willamette, twelve miles above the city.

Astoria, near the mouth of the Columbia River in Clatsop County, is the most important center of the fish-canning industry. Baker City is the center of the gold-mining industry and the most important town in Eastern Oregon. Salem, the capital, is a growing and beautiful city situated on the eastern bank of the Willamette River, fifty-two miles above Portland, where Mill Creek joins the main stream, affording abundant water-power. Eugene is at the head of steamboat navigation on the Willamette River and is the seat of the University of Oregon.

Historical. The vast region including what is now the State of Oregon was claimed by four nations: Spain, Great Britain, Russia, and France. The claims of the United States were based upon discovery by Captain Robert Gray of Boston, who in 1792 entered the Columbia. In 1804–05 Captains Lewis and Clark, in behalf of the United States, explored the Columbia River from its source to its mouth, and in 1810 an American, Nathaniel Winship, representing a Boston company, erected at Oak Point the first house built on the Columbia River. In 1818 a treaty of "joint occupancy" was made between Great Britain and the United States which held the conflicting claims in abeyance. Methodist missionaries from the United States founded a mission at Salem in 1834, and in 1836 Dr. Marcus Whitman and Rev. H. A. Spalding founded a mission in the Columbia Valley. A few years later British colonization began and this aroused interest in the United States. In 1843 Doctor Whitman convoyed a large caravan from Missouri to Oregon and in that year a provisional government was organized by the people. In 1846 the joint occupancy was discontinued, the British withdrew, and in 1848 Congress erected Oregon into a Territory. Trouble with the Indians retarded early growth and wars with the tribes broke out in 1855, 1877, and 1878. The famous Modoc tribe, a branch of the Klamath nation, long terrorized Southern Oregon and Northern California, but was finally suppressed by United States troops. Oregon was admitted into the Union as a State in February, 1859.

HARVESTING ON A GREAT WHEAT FARM

On the immense wheat farms of the Pacific Coast the most elaborate devices of mechanical ingenuity have been called into play to serve the grain grower. It is only in these States of the Far West that there can be seen in operation the combined harvester and thresher, a miracle of modern invention which, dragged slowly across a field, cuts the standing grain, threshes it as it moves, and drops the filled and tied bags to be gathered up by wagons that follow.

WASHINGTON

WASHINGTON is a Pacific Coast State lying south of the Canadian border. Roughly rectangular in form, it comprises an area of 69,180 square miles, of which 2,300 square miles are water surface. The population now includes about 21 per cent of foreign-born. There has been a notable increase in urban population, of which fully five-sixths live in the cities of Seattle, Tacoma, and Spokane.

THE CAPITOL AT OLYMPIA

Olympia has been the capital of Washington since the creation of the Territory and the inauguration of government in 1854. It was then the chief settlement in the Territory and the terminus of the only immigrant road across the Cascade Range. The Capitol originally was the courthouse of Thurston County, in which Olympia is situated. The State Government, being restrained constitutionally from creating a building fund debt, purchased the courthouse, and in 1903 occupied it.

Mountains and Rivers. The State is divided into two unequal parts by the Cascade Range, which extends across it in a northerly direction, with an average elevation of about 8,000 feet. Mount Rainier, with an elevation of 14,526 feet, is the highest point in the State and is notable for its snow-fields and glaciers South and east of Mount Rainier are the volcanic peaks, Mount Adams (12,470 feet) and Mount St. Helens (10,000 feet). Mount Baker, near the Canadian border, reaches 10,827 feet. West of the Cascade Range are the Olympic Mountains, near the ocean. Their precipitous slopes constitute a forest reserve and form the most heavily timbered region in the United States. In the southwestern part of the State are the highlands forming a portion of the Oregon Coast Range.

To the east of the Cascade Mountains is a vast basaltic plateau built up by ancient lava flows. Its nearly level surface, unbroken by forests but marked by canyon-like valleys, rises at the southeast into a hill country called the Blue Mountains, and at the north is enclosed by the Okanogan Highlands, which form a part of the Rocky Mountain system and occupy the northeast corner of the State.

The characteristic feature of Western Washington is Puget Sound, a great landlocked body of water with an area of about 2,000 square miles and surrounded by rugged scenery of extreme beauty. The largest river of Washington is the Columbia, which rises in British Columbia and enters the State from the north, flows southerly and westerly across the State, and thence for a distance of about 300 miles forms the boundary between Washington and Oregon. The Snake River, the principal tributary of the Columbia, enters the State from Idaho, flowing between the walls of a canyon of varying heights which it has cut through the vast lava sheets of the plateau. The Okanogan River, which has its source in Okanogan Lake, British Columbia, joins the Columbia on the north. The Spokane River, noted for its fine falls, flows into the Columbia, as do also the Yakima River—the largest western tributary of the Columbia—the Lewis River, and the Cowlitz River.

Climate, Flora, and Fauna. The great diversity in physical features necessarily insures to the State varied climatic conditions.

VIEW OF A HOP FIELD IN WESTERN WASHINGTON

The peculiar combination of soil and climate that makes hop culture possible is possessed by very few localities within the United States. Among these few, however, are the valleys of the Puyallup and other streams of Western Washington, where warm, moist winds from the Pacific nourish the growing vines and produce a yield the average of which is greater than that of any other region. In these districts may be seen immense fields of luxuriant trellised vines, the long, straight rows, extending as far as the eye can follow, giving an oddly geometrical effect to the rural landscape. Hop-picking time, when the workers gather to strip the vines of their ripened flowers, is a gala occasion. Indian laborers come from as far away as Alaska at the picking season.

Owing to the fact, however, that Washington is situated in the zone of prevailing westerly winds and that these are affected by the equalizing influences of so large a body of water as the Pacific Ocean, the climate is milder than is usual in other regions in the same latitude. In Western Washington the range of temperature for the year is generally from 35° to 65°, while in Eastern Washington, as a rule, it is from 25° to 70°. Throughout the State the precipitation shows the greatest diversity. It is heaviest near the coast and on the higher summits of the Cascade Mountains. In Eastern Washington the rainfall is light just east of the Cascades, but ample in the farming districts lying toward the eastern border.

WHARF SCENE AT SEATTLE

Seattle occupies a leading place among the seaports of the Puget Sound region. The nearness of the Sound to British Columbia and Alaska makes its cities natural depots for the commerce of those regions, while the high latitude also gives its cities an advantage over more southern ports in trade with Asiatic countries.

Plant and animal life are diversified in character and in distribution. Almost all of Western Washington is covered with dense forests, chiefly of evergreen trees, embracing fir, cedar, hemlock, spruce, and larch. In Eastern Washington the forests, chiefly of lodge-pole pine, yellow pine, and tamarack, are found on the slopes of the Cascades. Throughout the latter region the bunch-grass flourishes luxuriantly, but on the more arid lowlands the principal plant is sage-brush. Among the larger wild animals are elk, deer, bears, goats, wolves, and sheep, but the large game is now rare.

INDIAN FISHERMEN OF PUGET SOUND

The tribesmen who live along the Pacific coast from the Columbia River to Alaska are expert boatmen, thanks to centuries of dependence upon the coastal waters for much of their food supply. The reservations assigned to the coast Indians of Washington are laid out so as to border upon tidal waters, and to-day, as of old, their great dugouts, propelled by the sweep of sinewy arms, may be seen skimming over the waters of the Sound.

Farms and Forests. The agricultural resources of Washington are varied and extensive, owing to the peculiarly favorable climate and the general richness of the soil. Large areas of Eastern Washington, without natural water facilities, are now made cultivable by irrigation systems. Washington ranks among the more prominent of the grain-producing States of the country. The great wheat belt lies along the eastern border. Oats, hay, hops, and sugar-beets are important crops. Dairy-farming is an established industry, the commercial importance of which is rapidly increasing. Stock-raising is also an important industry throughout the State. Throughout the greater part of Washington both climate and soil are highly favorable to horticulture.

The forests of Washington constitute a most important source of wealth. The wooded area of the State comprises 34,000 square miles and extends from the Pacific Coast eastward to the Cascade Range, including also the eastern slope of that range and a portion of the State east and north of it. The timber mainly is Douglas fir, mingled with large amounts of hemlock, yellow pine, and cedar.

Fisheries and Mines. The fisheries of Washington are of great importance. While the salmon fisheries of the Columbia River and Puget Sound are the most valuable, the waters of the latter contain many other varieties of excellent food-fish. Chief among these are sturgeon, cod, halibut, herring, and smelts. It is predicted that the cod fishery will in time rival that of New England. When the shipment of salmon to San Francisco began the waters of the State teemed with fish, but soon after the introduction of canneries the streams began to show depletion, and in 1895 the State began the establishment of hatcheries to prevent an utter extermination. Profitable oyster beds exist in Puget Sound and Willapa Harbor. Crabs and shrimps are also gathered for market.

Among the natural resources of the State are valuable mineral deposits in both Eastern and Western Washington. The development of the mineral wealth is marked by a steady growth, the amount of money invested in mining and the value of the output of the mines increasing annually. Gold and silver are found in many districts of the Cascades and in the Okanogan Highlands. At present, however, the most important mineral product of the State is coal, which occurs in a number of fields or basins, some of them of great area. Copper is mined in several places. Valuable deposits of iron await railroad

VIEW IN FIRST AVENUE, SEATTLE

Seattle, named from a Duwamish chief, whose friendly aid to the first settlers was thus recognized, is one of the oldest settlements in Washington, but its advance to cityhood and its sudden and remarkable development date from the advent of a transcontinental railway. Built upon sloping hills and terraces that rise from the waters of Elliott Bay, it is naturally a sightly city, made doubly handsome by the scores of modern business blocks lining its avenues of trade.

facilities. Limestone exists in a number of localities, being especially abundant on San Juan Island. Granite quarries are worked. Sandstone of excellent quality occurs in inexhaustible quantities and is largely quarried for building purposes. Marble is found in many places and there are also valuable talc beds.

Trade and Manufactures. Previous to 1885 the industrial development of Washington was retarded by the lack of transportation facilities, but from that date, when railway communication was established with the older settled parts of the United States, the advancement has been rapid. The exploitation of Alaska, the annexation of Hawaii, and the growth of trade with Japan and China have had an important effect on the increase of production and industry in the State. Preëminent among the industries of Washington stands the manufacture of lumber and timber, the chief seat of this industry being the Puget Sound district. Red fir lumber and cedar shingles are the characteristic products.

Next to the lumber industry rank the manufactures in flouring and grist mills. Wheat flour forms an important article of export to China and Japan The preserving and canning of fish is one of the oldest industries in the State, its establishment dating from the settlement of the Territory There are ore smelters at Tacoma, Everett, and Northport In the dairying districts are condensed milk factories. Among other industries is that of wooden boat and ship building, for which Washington is well fitted owing to its peculiar forest wealth. Steel battleships are constructed at Seattle yards. Paper and pulp manufacture has also been established on the basis of the forest product.

SPORT IN A MOUNTAIN GORGE

Among the mountains of Washington are many spots of rare beauty, where rushing torrents make their way through great clefts in the mighty rock, forcing a downward passage in foaming rapids and swirling pools. Here, in the shadow of cliff and stately forest, the sportsman seeks his prey.

SCENE ALONG GREEN RIVER

The waters of Green River, which lie conveniently near one of the great railway lines, are famous as the home of speckled trout over which anglers grow enthusiastic. Winding through secluded mountain valleys, the river presents to the visitor many strikingly beautiful bits of scenery.

Chief Cities. Seattle, the chief city of Washington, being first in commercial importance and second in size of the Pacific Northwest, has had a phenom enal growth. Tacoma occupies a commanding situation on a promontory at the head of Commencement Bay, Puget Sound The ocean commerce of the city is enormous, especially in lumber, wheat, and coal. Spokane, the leading commercial and railway center of Eastern Washington, is situated on the Spokane River and is the distributing center of all the country lying between the Rocky Mountains and the Cascade Range.

Olympia, on Puget Sound, is the capital and one of the oldest settlements in the State. The harbor, deepened and widened through improvements made by the National Government, admits all ordinary vessels of the Puget Sound fleet. Wallawalla, the second city in size and commercial importance in Eastern Washington, is the center of a fruit region. Everett, thirty miles north of Seattle, one of the most thriving towns on the Sound, is a prominent industrial center, and the outlet for a rich mining and lumber district. Bellingham, formed by the consolidation of Whatcom and Fairhaven, is a coal-mining and lumber town on Bellingham Bay, possessing immense salmon canneries and saw-mills.

Historical. The first historical event recorded in connection with this region was the discovery in 1592 of the Strait of Juan de Fuca by a Greek of that name in the employ of Spain. In 1775 Captain Bruno Heceta, a Spanish navigator, discovered the mouth of the river now known as the Columbia. During 1787–89 Captain Kendrick, an American in command of an expedition sent out by Boston merchants to the northwest coast and China, carefully explored the Strait of Juan de Fuca. In 1792 Captain Robert Gray explored the coast between 46° and 56° N. lat. and discovered the great river, to which he gave the name of his ship, the "Columbia." Succeeding expeditions of American, English, and other voyagers rendered the coast well known, and the United States Government began sending out expeditions to obtain a knowledge of the interior. Of these the most important was that of Lewis and Clark, who explored the Columbia in 1804 and 1805. With the exception of missionaries who settled in the country in 1838 and 1839, trappers and fur traders were the sole white inhabitants of the Territory until 1845. when a settlement called New Market, now Tumwater, was made at the head of Puget Sound. In 1846 the treaty with Great Britain gave the United States unquestioned possession of the region. Fort Steilacoom was founded in 1851 and Port Townsend located the same year. In 1853 an act was passed organizing the Territory of Washington, but owing to its remoteness the growth of the Territory was slow, and it was not until 1889 that Washington was admitted as a State into the Union.

MOUNT RAINIER, AS SEEN FROM TACOMA

Mount Rainier, with one exception the highest peak of the United States south of Alaska, rears its snow-crowned head high above its neighbors of the Cascade Mountains. In ages past it was an active volcano and down the gorges of its rocky sides may even now be traced the paths of lava streams. To this day sulphurous fumes issue from its summit, but vast forests grow upon its sides, and in the clefts of its upper heights are glaciers that feed the icy mountain streams.

ALASKA

ALASKA is the northernmost possession of the United States. Careful estimates made by Government officials give the area as 590,884 square miles. The compact block that constitutes the main portion of Alaska has a breadth, from east to west, of 800 miles and a length, from north to south, of 1,100 miles. From the main portion of the Territory extends a projection to the southwest which includes the Alaska Peninsula and the Aleutian Islands, the latter extending 1,500 miles into the Pacific Ocean toward Asia. A narrow strip of mainland, which averages thirty miles in width, together with about 1,100 adjacent islands constituting the Alexander Archipelago, extends southeasterly toward British Columbia.

STREET IN SITKA, THE ALASKAN CAPITAL

At the base of Mount Verstovia is the little city of Sitka, where the official rulers of Alaska have made their headquarters since the Russians founded the settlement in 1804. It is a town of wooden buildings as yet, despite its century of existence. There are few public edifices. The court-house, used by the federal court, is perhaps the most important of those that exist. Far more interesting, however, is the Russian church, St. Michael's Cathedral, whose spire is the most prominent feature of the city.

Coast Features. The coast-line of the territory, including that of the islands, has an estimated length of 26,364 miles. The Pacific portion, from Dixon Entrance north to Cross Sound, presents more natural wonders than any region of equal extent in the world. Along the coast the land rises from the water very abruptly to altitudes of thousands of feet. The islands are separated from the mainland by channels, the bottoms of which are hundreds of fathoms below the surface, while the deep, narrow fiords extend far into the mainland, branching out on either side into similar deep inlets. In this region the glacial formations are prominent.

Yakutat Bay is a deep, funnel-shaped fiord that penetrates far northeastward into the mountain region. Between the Copper River and the Kenai Peninsula lie the almost landlocked waters of Prince William Sound. Mountainous islands obstruct its entrance. The entire sound is studded with islands, about fifty in number, for the most part mere peaks from 1,000 to 2,000 feet high.

The eastern shore of Bering Sea is in general low, bordering an almost level, treeless belt or tundra. The greatest indentations in this portion of the Alaska Coast are Kotzebue and Norton sounds and Bristol Bay. The first named has a maximum depth of eighty-four feet and a low, swampy shore, except where Cape Lisburne rises to a height of 850 feet above sea-level. Norton Sound is also shallow, but it affords a few good harbors, as also does Bristol Bay, which extends into the mainland of Alaska immediately west of the head of the Alaska Peninsula.

Glaciers. The entire coast shows unmistakable evidences of glacial action; in some places the ice has retreated only recently, as is shown by the limited action of the water, while in other localities the powerful eroding influences are still at work, as they have been for countless ages. All of the gorges that have been eroded by glaciers exhibit the marvelous and irresistible power of the ice-sheets, which have been impelled toward the coast by the ever-increasing glacial masses formed in the interior. Lynn Canal is an excellent illustration of these glacial fiords; it is ninety miles long and from it more than 200 cubic miles of rock have been carried away by the moving ice and deposited in the Pacific Ocean. Enormous quantities of rock from other fiords of Southeastern Alaska have also been transported oceanward in the same manner. Between Yakutat Bay and Prince William Sound are many other immense ice-fields. One of the largest in this region is the Malaspina Glacier, which occupies a great plain at the foot of Mount St. Elias, northwest of Yakutat Bay. This glacier fronts fifty miles on the sea, and extends back thirty miles to the St. Elias Range, being fed from these mountains. A peculiar feature of the Malaspina Glacier is a forest growing out of the accumulation of dirt and stones that conceals the ice.

Yukon Region. Alaska falls naturally into three distinct physical divisions—the Yukon or Northern, embracing the region lying north of the Yukon River; the Aleutian, or the territory south of the Yukon River and west of the meridian of 141° W., including the Alaska Peninsula and the Aleutian Islands; and the Sitka, or the region extending south along the Pacific Ocean, including the adjacent islands. The Yukon division is characterized by bold, rocky hills and marshy plains between the belts of highland. Along the Arctic Coast is a broad tundra belt, south of which a rugged mountain range trends from east to west.

MOUNT McKINLEY, IN THE ALASKAN RANGE

The great mountain range that marks the watershed between the Sushitna and Tanana rivers is called specifically the Alaskan Range. It is a lofty and rugged stretch of serrated highland, carved with immense gorges thousands of feet in depth, and rising in great peaks at intervals. The highest of these is Mount McKinley, 20,464 feet in altitude, the most elevated point in all North America. The Russian explorers called it Bolshaya, or Big Mountain. Its more recent name was given by a prospector, an admirer of the President, who penetrated the Alaskan wilderness during the gold excitement.

Excepting the western coast and the valleys of the Yukon River and a few of its affluents, comparatively little is known of Northern Alaska. Between the Yukon basin and the Arctic Coast the rugged ranges, known under several different names, are all part of the westward extension of the Rocky Mountains. Their elevation is from 5,000 to 7,000 feet, running out to the northwest in a mere highland belt which disappears in the treeless plains.

FACE OF THE MUIR GLACIER

The great ice-wall of an Alaskan glacier breaks up where it meets the ocean tides. Here gigantic icebergs split off with crash of thunder, rising like awful monsters from the sea depths, while unceasingly there falls from the glacier's precipitous front a cataract of smaller ice blocks.

STEAMER IN GLACIER BAY

Glacier Bay has seven distinct glacial streams emptying their ice masses into its waters. Tourist steamers can usually approach very near to some of these, and consequently the place is annually visited by sight-seers. The famous Muir Glacier is in Glacier Bay.

The Aleutian Region. Precipitous mountain chains, deep valleys, dense mainland forest and treeless coastal islands are dominant features here. The Aleutian division is traversed by a broad mountain system, a section of the cordillera of North America, trending northwestward along the Pacific Coast, with spurs extending northward and covering large areas lying between the Yukon River on the north and the main range on the south; the latter continues through the Alaska Peninsula and the Aleutian chain of islands, which are merely the summits of the partially submerged gigantic mountain system. The islands contain many volcanoes, some extinct and others dormant but smoking. Evidences of recent volcanic activity are found in the existence, a short distance north of the Aleutian Islands, of two islets of recent formation. One of these young islands, known as Bogoslof, was thrown up in 1796, while the other, Grewingk, rose above the surface of the sea in 1883. The highest peaks in Alaska are in the southeastern part of the Aleutian division and include Mounts St. Elias (18,024 feet), Wrangell (17,500 feet), Blackburn (16,140 feet), Drum (13,700 feet), Sanford (13,500 feet), and Tillman (13,300 feet). Farther to the northwest are Mount McKinley (20,464 feet), the loftiest peak in North America, and Mount Hayes (14,000 feet).

Sitka Region. The Sitka division in the southeast is the best known section of the Territory. On the mainland are rugged, rocky mountains that, except in the case of a few peaks, do not attain elevations to compare with the ranges in the Aleutian division. A greatly broken line of highlands parallels the coast from the Stikine River northward around the head of Lynn Canal to Mount St. Elias on the international boundary. Beyond that point the range comprises two chains, the southern, known as Fairweather Range, following the coast; while the northern, trending inland into the Aleutian division of Alaska, is merged into the highlands of the St. Elias Range. The highest peaks in this division are Mounts Lituya (11,832 feet), Fairweather (15,292 feet), and Crillon (15,900 feet). The islands that comprise the Alexander Archipelago extend westward from the shore for a distance of from 90 to 100 miles; they are really projections of the ranges on the mainland and among them are the sheltered routes of coasting vessels. Some of the islands are quite large, with a mild climate and a fertile soil adapted to agriculture.

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THE TAIYA RIVER ABOVE DYEA

Before the building of the railroad from Skagway American miners reached the gold-fields of the Upper Yukon by way of the Lynn Canal and Taiya River, using canoes on the broad and shallow course that led to the rough highland country. Along this route, facing the snowy heights of distant mountains, thousands of gold-seekers toilsomely found their way to the Klondike district.

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GLACIER AT LITUYA BAY

Many glaciers are found in the numerous bays of the Alaskan coast from the Alexander Archipelago northward. At Lituya Bay, near 59°, are two great ice streams that have found their way from fifty miles inland to the rocky coast, where the glacier shows a mighty face of perpendicular ice-wall towering three hundred feet above the waves. Back of these moving ice-streams the country is everywhere worn into rounded slopes and hills by the action of former glaciers that have passed away.

Hydrography. The territory of Alaska is intersected throughout by a network of lakes and rivers. Navigation of these, which, except along the length of the Yukon, is carried on almost wholly in canoes, is greatly impeded by rapids and falls. The principal highway is the Yukon River, rising east of the Canadian boundary, which has a length of about 2,000 miles with a volume of water exceeding that of the Mississippi River. During the open season it is navigable throughout its course for flat-bottomed vessels of 400 to 500 tons. The delta of the Yukon covers thousands of square miles of territory and is composed of the silt and driftwood brought from the interior. The next largest river is the Kuskokwim, which is navigable for nearly 600 miles for steamboats of large size. The Sushitna River drains a valley from 75 to 100 miles wide and nearly 200 miles long, and empties into Cook Inlet, its grass-covered delta forming a desolate moorland little elevated above the tides. The scenic effect in the region, with its canyons, snow-capped peaks, glaciers, and lakes, is not surpassed anywhere in Alaska. The Copper River is a large stream flowing into the Pacific Ocean and is distinguished for its remarkable delta, an immense mud-flat of 250 square miles that is flooded by the sea at every high tide.

Alaska has some large lakes. Located at the head of the Alaska Peninsula and near to Cook Inlet is Lake Iliamna, seventy-five miles long and twenty-five miles wide, surrounded by snow-capped mountains and discharging its waters into Bristol Bay. In the northwest, about the head waters of the Kowak and Koyukuk rivers, is a group of lakes of which Walker is the largest.

ESKIMO GIRL

The parka, a fur coat whose hood, drawn over the head, surrounds the face with a wide fringe of fur, is one of the characteristic Eskimo garments in the far North.

TOTEM POLES OF ALASKAN INDIANS

The natives of Southern Alaska are Indians, quite distinct racially from the Eskimo of the northern part. Among their interesting customs is that of erecting before their homes great wooden stakes or poles, lavishly carved with uncouth forms of animals. These designs indicate the clan or tribal relationship of the owner as well as his individual emblem.

Climate. The climate of Alaska varies greatly in different portions. The zones along the coasts are totally unlike each other and differ widely from the interior regions. At Sitka the mean annual temperature is 43°, which is about that of Eastport, Maine. The climate of the Pacific Coast, from Portland Canal to Attu Island at the western end of the Aleutian insular chain, has very unpleasant features due to a combination of cold with excessive dampness and fog. The amount of rainfall along the entire western frontier is enormous, being about 105 inches at Sitka and diminishing but little toward the west; the precipitation occurs mainly during the autumn and winter months. The reason for both the high average temperature and the excessive rainfall is that the Pacific Coast of Alaska lies within the range of the westerly winds, bringing to the land the temperature and moisture of the sea.

On the Bering Sea Coast the average temperature is much lower and the extremes of range greater. The mean annual temperature is 26° and the extremes show a range of 130°. The ocean currents have little effect upon the temperature of Bering Sea, the Aleutian Islands forming an effectual barrier against the northern progress of the warm waters of the Pacific Ocean. The climate of the interior of Alaska is relatively warm in summer and cold in winter. The rainfall is light, varying from ten to twenty-five inches. There is little dull, cloudy weather and practically no fog, and many sunshiny days occur here in a month, but at Fort Yukon the winter temperature reaches 69° below zero.

Flora and Fauna. The flora of Alaska is not extensive. As far west as Cook Inlet the coast is densely forested below the timber-line, which ranges from 2,000 to 3,000 feet above sea-level. In that region Sitka spruce predominates. At higher levels the hemlock is found, while alder, birch, and cottonwood occur on the Kenai Peninsula. The spruce attains large size and prevails over an area extending northward to the Koyukuk River and westward to the delta of the Yukon River. On Kodiak and adjacent islands there is little timber, and farther west, on the Alaska Peninsula, the Aleutian Islands, and the islands of Bering Sea, there is none whatever. In the interior are enormous areas of coniferous forests. Wild grasses as well as flowering plants abound in the more favored localities.

The foremost game region is around Cook Inlet, where many of the larger animals are found, including the caribou, reindeer, and moose, besides the black, brown, and polar bear, and also a white mountain sheep much sought after for food. Occasionally mountain goats are found and the migratory aquatic birds are common in their season. Foxes are bred here for their fur,

REINDEER HERD AT ALASKAN MISSION STATION

For a number of years the United States government has annually imported reindeer from Siberia, placing them in charge of the mission stations of the northern coasts. Siberian natives and Laplanders have been hired to instruct the Eskimo people in their care. In this way herds have been established to aid the native Alaskan tribes of the North, whose means of subsistence were lessened through the killing of whales and walrus by the Arctic whaling fleets. The reindeer are easily domesticated.

and sable and mink are occasionally caught. The waters of the coast are well stocked with fish, some of which ascend the rivers in the open season. Seals, the most important and valuable of the animals indigenous to Alaska waters, are found on the islands, mainly the Pribilof group.

Native Races. Alaska has no less than four well-marked groups of aborigines. In the coast region of the southeast are the Tlinkit people, Indians of considerable intelligence. They are skillful seafarers and were formerly very warlike. Before the advent of the whites they controlled the trade of the coast, kept great numbers of slaves secured by war, and possessed well-built villages. Now they subsist largely by labor in the salmon canneries. In the southwestern region live the Aleuts, apparently a people of mixed Eskimo and Tartar blood. They are closely allied in manners to the Eskimo, and live by hunting and fishing. Russian missionaries have brought about their conversion and they are all members of the Orthodox Greek church. In the northern districts and on the western coast are the Eskimo tribes, expert canoeists and hunters, who live by catching fish, seals, and walrus, and who inhabit stone houses with subterranean passages. The Indians of the Yukon Basin are tribes of the Athapascan stock who obtain subsistence by the hunt, but are apparently incapable of absorbing the most ordinary elements of civilization.

SCENE IN THE OPHIR CREEK REGION

The Ophir Creek basin in the famous Seward Peninsula is a thoroughly characteristic section of Western Alaska. Broad valleys, limited by sloping terrace formations, contain great stretches of grassy plains and occasional patches of stunted forest growth. The streams are shallow and hardly entitled to be called navigable. Much of the soil is gold-bearing and is parceled out in claims, but few are valuable.

Mineral Wealth. The mining of gold is the most important commercial industry of Alaska. One of the largest known gold-fields extends for about 500 miles southeast from the Lower Ramparts on the Yukon River across the eastern boundary into the Yukon District of Canada. In this belt are located valuable placers and gold-bearing quartz veins. In the southwestern section the yellow metal has been washed out of the river bars and gravels of the Kuskokwim, Sushitna, and Copper rivers. On the southern coast deep mining has been carried on for many years and several large quartz-mills are in operation. The Nome district, the richest yet discovered, is located in the southern part of Seward Peninsula. The beach diggings extend about thirty miles along the coast. Coarse gold is mined in Anvil, Glacier, Dexter, and Osborn creeks and along Penny and Cripple rivers. With the employment of scientific methods of mining and the development of transportation facilities, the yield of the Alaska gold-fields will be increased to an enormous extent.

The coal formations of Alaska are extensive, but are in widely separated localities. Lignite predominates, but bituminous and semi-anthracite coal are found to some extent. The greatest development of coal areas has been along the waterways or in the vicinity of good harbors and markets. The Yukon coal is of inferior quality and the quantity mined depends upon local demand. The Cape Lisburne field, 200 miles from Nome, supplies the market of that Alaskan center of activity. Coal in paying quantities has been discovered on Kenai Peninsula. Other metals found are silver in a pure state, gold, cinnabar, platinum, and copper. Discovery of petroleum has been made near Cape Douglas.

TUBUTULIK RIVER AND VULCAN POINT

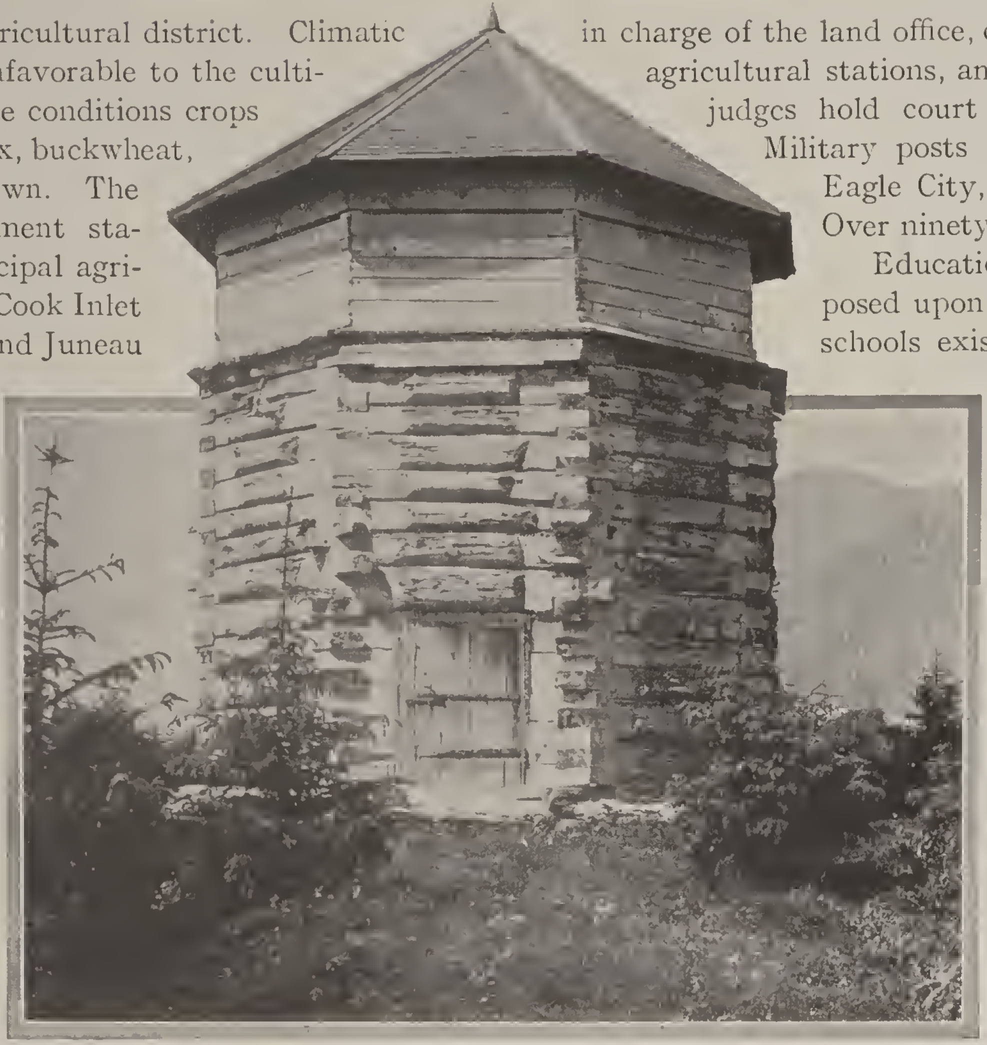
Tubutulik River, one of the minor streams of the Seward Peninsula, rises in a group of granite mountains and winds toward the sea, sometimes hemmed in by mountain groups like that to which Vulcan Point belongs, until it reaches the broad marshy plains near Norton's Bay, into which it empties. Some attractive scenery is found along its length.

SCHISTOSE ROCKS AT GOLOFNIN BAY

About seventy miles east of Cape Nome is Golofnin Bay, opening into a landlocked harbor called Golofnin Sound. Along the eastern shore of the Sound extends a line of low bluffs made up of schistose rocks whose horizontally foliated structure is of great interest to geologists. Where the rock has been broken by earth changes it forms huge crags that tower above the coastal terrace.

Fisheries and Farms. The fisheries rank second among the industrial enterprises of Alaska. Southward from Bering Strait to Dixon Entrance the bays, inlets, and streams swarm with the most valuable and delicious food-fishes, chiefly salmon, cod, herring, and halibut, with about seventy-five other excellent varieties. Salmon canning is carried on at points in the Sitka region. The fishing banks cover an area of 50,000 square miles and are much safer than the Grand Banks of Newfoundland. The seal fisheries, once exceedingly profitable for both the Government and those who engaged in them, have been in late years threatened with destruction through the vandalism of sealers who killed in the open sea many more animals than they could take, and who slaughtered indiscriminately the mother seals while they were absent from the rookeries in search of food for their young.

Alaska cannot be considered an agricultural district. Climatic conditions in general are distinctly unfavorable to the cultivation of the soil, but under favorable conditions crops will mature. Wheat, barley, oats, flax, buckwheat, and hardy vegetables have been grown. The government has agricultural experiment stations at Sitka and Kenai. The principal agricultural centers of Alaska are around Cook Inlet on the southern coast and near Sitka and Juneau in the southeast. Seward Peninsula, however, bids fair to become a grazing country of some importance, being very similar in its physical conditions to Finland.

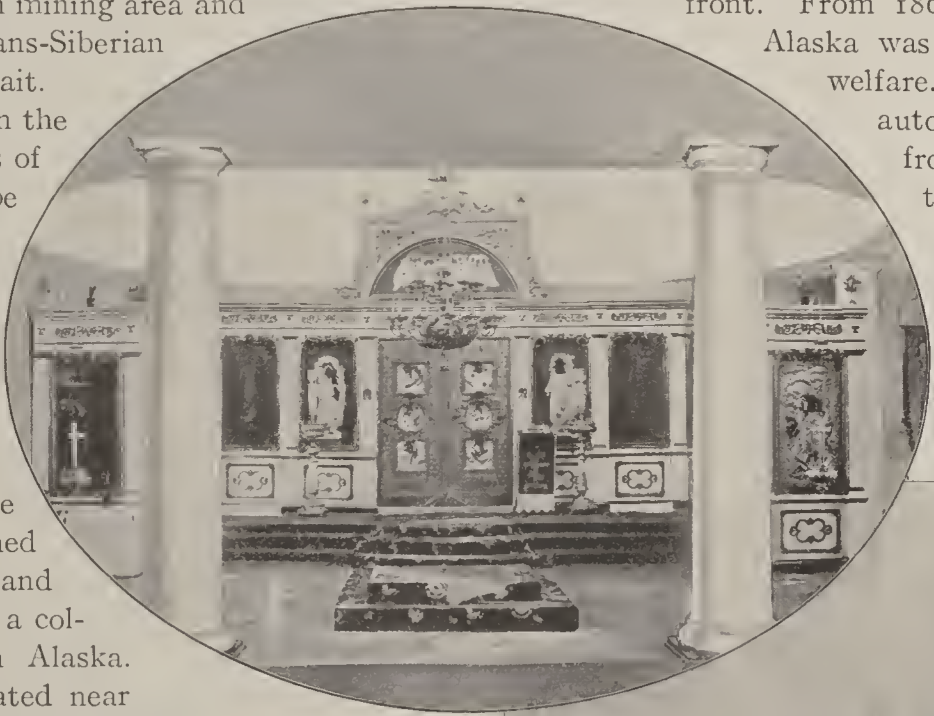


RUSSIAN BLOCKHOUSE, SITKA

An octagonal blockhouse at Sitka is an interesting relic of the Russian occupation. It once stood at one of the angles in the stockade which guarded the Russian fort and was used as a lookout tower. Built strongly by dovetailing huge timbers, it seems likely to bid defiance to the action of the elements and remain a local monument for centuries.

Communications. Until the gold discoveries Alaska was without internal highways. The opening of the Klondike created two routes, one following the Lynn Canal and reaching British territory over the Chilkoot, Chilkat, or White passes, the other following the waterways from St Michaels up the Yukon River to the gold-fields. Soon a third route was supplied by a government trail from Valdes to Eagle City. Rapid improvements were made. A railroad now runs from Skagway over the White Pass into Canada and a steamer line traverses the Yukon, while a projected railroad has been surveyed to supersede the government trail to Eagle City. A military telegraph, 1,740 miles long, erected by the government, connects the principal towns. In the Nome district there is a short five-mile railway completed, while another under construction from Solomon City inland will tap a rich mining area and may ultimately connect with the Trans-Siberian Railroad by a service across Bering Strait.

Towns. Nome is the largest town in the Territory and the center of rich deposits of gold. Although its population may be regarded largely as a floating one, the town is incorporated and has many of the conveniences of a well-established modern city. Skagway, an incorporate city at the head of Taiya (Dyea) Inlet, the eastern arm of Lynn Canal, is a subport of entry, the terminus of the railway over White Pass, and the point of departure for gold-seekers destined for the Yukon District over Chilkoot and White passes. The town is the seat of a college established in 1899, the first in Alaska. Juneau is a thriving trade center situated near the mouth of Lynn Canal and has been designated as territorial capital, to succeed Sitka in the near future. Sitka, the present territorial capital and also port of entry and naval depot, is situated on the western coast of Baranof Island. It has an industrial school and hospital, and contains the oldest Greek church in the country. Valdes, on Prince William Sound, has a landlocked harbor open all the year and is terminus of the government trail. Other towns are Wrangell, near the mouth of the Stikine River; St. Michaels, on Norton Sound; and Douglas, on Douglas Island, near Juneau. Dutch Harbor is a naval coaling station for the North Pacific fleet.



INTERIOR OF GREEK CHURCH, SITKA

Government. Alaska, from 1867 to 1877, was under military government; from 1877 to 1879 the customs collectors of the Treasury Department were in full control, and from 1879 to 1884 the naval officer charged with patrolling the coast was local executive. In 1884 the region was given civil officers and has since been considered as a distinct territory, although without legislature or written constitution, and having no delegate in Congress. The governor is appointed by the President for a four-year term. With him are associated officers in charge of the land office, customs house, internal revenue office, agricultural stations, and offices of education. United States judges hold court at Juneau, Nome, and Eagle City. Military posts are maintained at Skagway, Valdes, Eagle City, Nome, St. Michaels, and Fort Gibbs. Over ninety post offices have been established.

Education is provided for by a license fee imposed upon business firms. About thirty public schools exist, supplemented by various religious mission schools. At Sitka is an industrial and training school and at Skagway a college.

History. In 1741 a Russian exploring expedition from Siberia reached the North American coast, but not until 1777 did the commercial exploitation of Alaska begin, and not until 1788 did the Russian government assume title to the country by granting control to a trading company. Trading posts were established on a permanent basis, and in 1794 an agricultural colony was organized at St. Paul, on Kodiak Island. Trading and Indian wars marked the colonial annals for many years, but Russian power was gradually extended by a succession of energetic governors. In 1804 Sitka was founded as the capital. The transfer of Alaska to the United States in 1867 was immediately followed by withdrawal of the Russian-American Fur Company, which sold its property to an American corporation, and the fur interests dominated the affairs of Alaska until the gold discoveries forced other influences to the front. From 1867 until 1897 the American control of Alaska was marked by no advance in territorial welfare. The government was practically an autocratic one and elicited much complaint from the few settlers who had made homes there. The region was very little known. Gold prospectors had, however, learned that gold existed and they steadily explored in search of the metal. The result was the great Klondike excitement of 1897, which brought a flood of new settlers to develop the territory.

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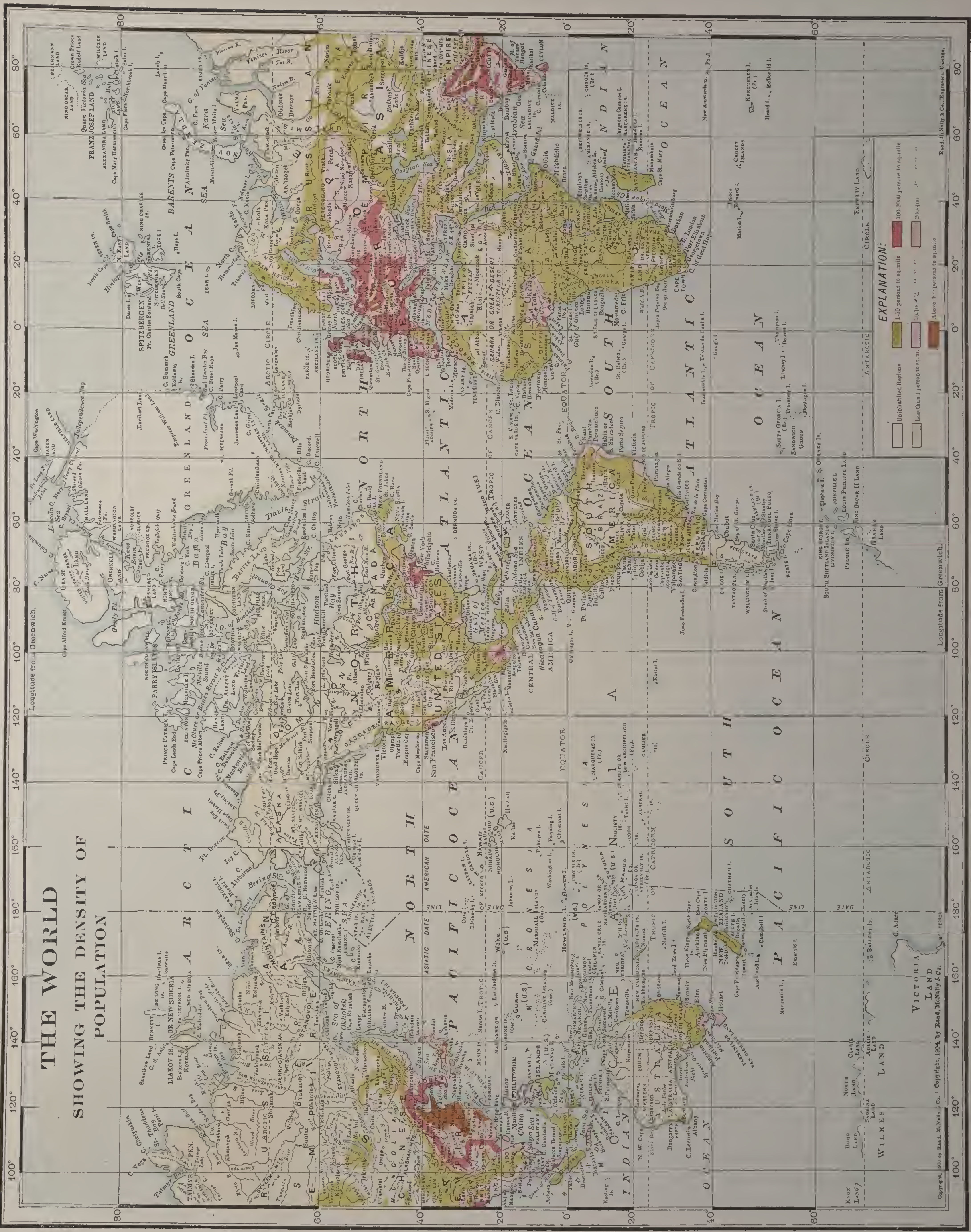
ORTHODOX GREEK CHURCH, KOTLIK, NORTON SOUND

The Russians, during their control of Alaska, were very energetic in establishing missions. Kotlik is a little Eskimo village on the Kotlik River, one of the streams that form the delta of the Yukon. The Russian missionaries have been at great pains to maintain their church here and its interior is said to be very pretty with its wealth of decorative color.


THE WORLD
SHOWING THE DENSITY OF POPULATION
EXPLANATION:
Uninhabited Regions
1-50 persons to sq. mile
100-200 persons to sq. mile
Longitude from Greenwich.
Copyright, 1904, by Rand, McNally & Co.

NORTH POLAR REGIONS
SCALES.
Statute Miles, 350 – 1 Inch.
Kilometres, 560 – 1 Inch.
LONGITUDE EAST 130° FROM GREENWICH
CHINESE EMPIRE
ASIATIC RUSSIA
RUSSIAN EMPIRE
SIBERIA
ARCTIC CIRCLE
ARCTIC OCEAN
UNKNOWN
PACIFIC OCEAN
BERING SEA
SEA OF OKHOTSK
JAPAN SEA
KARA SEA
NOVAYA ZEMLYA
FRANZ JOSEF LAND
NEW SIBERIA OR LIAKOV ISLANDS
WRANGEL LAND
ALASKA
ALEUTIAN ISLANDS
KAMCHATKA
SAGHALIEN ISLAND
Kuril Islands
BERING STRAIT
NORTON SOUND
TAIMYR PENINSULA
YALMAL PENINSULA
STANOVOI MTS.
YABLONOI MTS.
URAL MTS.
ALASKA MTS.
Lake Baikal
Irkutsk
Yakutsk
Okhotsk
Krasnoiarsk
Yeniseisk
Tomsk
Verkhoyansk
Lena River
Yenisei River
Amur River
EXTREME LIMIT OF ICE
Dr. Nansen, April 8, 1895.

ATLANTIC OCEAN
LONGITUDE WEST 40° FROM GREENWICH
GREENLAND
BRITISH ISLES
ICELAND
DENMARK STRAIT
BAFFIN BAY
DAVIS STRAIT
HUDSON BAY
LABRADOR
NEWFOUNDLAND
UNITED STATES
BRITISH AMERICA
EUROPE

THE WORLD

Abyssinia .H 31 (Kingdom) Ar., 150,000 sq. m. Pop......3,500,000

Afghanistan F 3 (Empire) Ar., 250,000 sq. m. Pop......4,000,000

Algeria ...F 28 (French Colony) Ar., 184,474 sq. m. Pop......4,739,556

Argentine Republic .L 21 (Sp.-Am. Rep.) Ar.,1,135,840sq.m. Pop......5,160,986

Australia ..L 5 (British Colony) Ar.,2,972,906sq.m. Pop. 3,771,715

Austria-Hungary .E 30 (Monarchy) Ar., 241,333 sq. m. Pop. ...46,952,863

Azores Islands ..F 25 (Portuguese Possession) Area...922 sq. m. Pop....... 256,474

Bagirmi ...H 29 (French Ter.) Area, 65,650 sq.m. Pop......1,000,000

Bahama Islands ..G 20 (British Colony) Area.5,450 sq. m. Pop. 53,735

Baluchistan G 34 (Empire) Ar., 131,855 sq. m. Pop. 914,551

Barbados Island ..H 22 (British Colony) Area...166 sq. m. Pop....... 198,000

Belgium . D 28 (Kingdom) Area, 11,373 sq.m. Pop......6,744,532

Bermuda Islands ..F 21 (British Colony) Area....20 sq. m. Pop..... .. 17,535

Bhotan ... G 1 (Kingdom) Area.16,800 sq.m. Pop........ 50,000

Bolivia ....K 21 (Sp.-Am. Rep.) Ar., 703,400 sq. m. Pop.......1,816,271

Borneo ......I 3 (Dutch Colony) Ar., 212,737 sq. m. Pop. .. .2,258,525

Borneo, North ..I 3 (British Colony) Area, 31,106 sq.m. Pop. 200,000

Brazil .....J 22 (Portug'se Rep.) Ar.,3,218,130sq.m. Pop.....14,333,915

British Isles D 27 (Kingdom) Ar., 121,391 sq. m. Pop.....42,789,552

Bulgaria ..E 30 (Principality) Area, 38,000 sq.m. Pop. 3,744,283

Canada, Dominion of .D 18 (British Colony) Ar.,3,745,574sq.m. Pop......5,371,315

Canary Islands .G 26 (Spanish Prov.) Area..2,807 sq.m. Pop....... 358,564

Cape of Good Hope ..M 30 (British Colony) Ar., 276,995 sq. m. Pop......2,405,552

Cape Verde Islands .H 25 (Portug'se Col.) Area..1,480 sq.m. Pop. 147,424

Caroline Islands ..I 6 (German Col'ny) Area...560 sq. m. Pop........ 36,000

Ceylon Isl. I 36 (British Colony) Area, 25,332 sq.m. Pop......3,578,333

Chile .....M 20 (Sp.-Am. Rep.) Ar., 307,620 sq. m. Pop......2,712,145

China .. ....E 3 (Empire) Ar.,4,376,400sq.m. Pop....426,337,300

Colombia ...I 20 (Sp.-Am. Rep.) Ar., 473,202 sq. m. Pop...... 3,916,666

Congo Independent State .....J 30 (Belgian Colony) Ar., 900,000 sq.m. Pop.....30,000,000

Costa Rica H 19 (Republic) Area.18,400 sq.m. Pop....... 243,205

Cuba ....G 20 (Republic) Area, 44,000 sq.m. Pop......1,572,797

Denmark ..D 28 (Kingdom) Area, 15,388 sq.m. Pop......2,464,770

Dutch East Indies ..J 4 (Dutch Colony) Ar., 736,400 sq. m. Pop.....36,000,000

East Africa, K 31 (Portug'se Col.) Ar., 301,000 sq. m. Pop......3,120,000

Ecuador ...J 20 (Sp.-Am. Rep.) Ar., 116,000 sq. m. Pop......1,205,600

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Samoa Isls. K 10 (U. S. and Ger. Possession) Area, 1,701 sq. m. Pop......38,412

Santo Domingo Island .G 21 (Sp.-Am. Rep.) Area, 18,045 sq.m. Pop.......610,000

Senegal ...H 26 (French Colony) Ar., 80,000 sq. m. Pop. 1,180,000

Servia ....E 30 (Kingdom) Area, 18,630 sq.m. Pop......2,492,882

Siam ....H (Kingdom) Ar., 220,000 sq.m. Pop.....5,000,000

Sierra Leone I 26 (Br. Protect'ate) Area, 30,000 sq.m. Pop. 1,000,000

Somaliland I 32 (Br. Protect'ate) Area, 68,000 sq.m. Pop.... .. 500,000

South Australia ..L 5 (British Poss.) Ar., 903,690 sq. m. Pop. 362,604

Spain ....F 27 (Kingdom) Ar., 197,670 sq. m. Pop.....18,618,086

Surinam (Dutch Guiana)... I 22 (Dutch Colony) Area, 46,060 sq.m. Pop. 72,295

Sweden ....C 29 (Kingdom) Ar., 172,876 sq. m. Pop....5,136,441

Switzerland E 28 (Republic) Area, 15,976 sq.m. Pop.....3,315,443

Tasmania ..N 6 (British Poss.) Area, 26,215 sq.m. Pop. 172,475

Transvaal Colony L 30 (British) Ar., 111,196 sq. m. Pop.....1,268,716

Trinidad and Tobago Isl'ds. H 22 (British Colony) Area..1,868 sq.m. Pop....... 273,898

Tripoli and Barka ..F 29 (Turkish Prov.) Ar., 398,900 sq. m. Pop......1,300,000

Tunis ....F 28 (French Colony) Area, 51,000 sq.m. Pop......1,900,000

Turkey, Tributary States incl. ......F 31 (Empire) Ar.,1,579,982 sq.m Pop.....40,440,957

United States ...E 17 (Republic) Ar.,3,622,933 sq.m. Pop.... 76,085,794

Uruguay M 22 (Sp.-Am. Rep.) Area, 72,210 sq.m. Pop. 978,072

Venezuela I 21 (Sp.-Am. Rep.) Ar., 593,943 sq. m. Pop......2,323,527

Victoria ..M 6 (British Poss.) Area, 87,884 sq.m. Pop.....1,201,070

Western Australia .L 5 (British Poss.) Ar., 975,920 sq. m. Pop. 184,124

Windward Islands H 22 (British Colony) Area...784 sq. m. Pop. 155,000

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

THE WORLD
(Continued)

FALKLAND ISLANDS...O 4
(British Colony)
Area 7,500 sq.m.
Pop. 2,050

FIJI ISLDS. .K 28
(British Colony)
Area..8,045 sq.m.
Pop. 120,124

FRANCE ... E 10
(Republic)
Ar., 207,054 sq.m.
Pop.....38,961,945

FRENCH INDO-CHINA ..H 20
(French Colony)
Ar., 256,000 sq.m.
Pop. ...18,230,000

FRENCH CONGO AND GABUN J 11
(French Ter.)
Ar., 450,000 sq.m.
Pop. 10,000,000

GERMANY.. D 11
(Empire)
Ar., 208,830 sq.m.
Pop.... 56,345,014

GREECE.....F 12
(Kingdom)
Area, 25,014 sq.m.
Pop......2,433,806

GREENLAND B 6
(Danish Colony)
Area, 46,740 sq.m.
Pop... 10,516

GUADELOUPE ISLAND AND DEPENDENCIES........H 4
(French Colony)
Area .. 688 sq.m.
Pop....... 182,112

GUAM ......H 24
(U.S. Possession)
Area...225 sq.m.
Pop. 10,000

GUATEMALA H 36
(Sp.-Am. Rep.)
Area, 18,290 sq.m.
Pop.. 1,842,134

GUIANA, BRITISH...I 4
(British Colony)
Ar., 90,950 sq.m.
Pop. 278,328

GUIANA, FRENCH. I 4
(French Colony)
Area 30,500 sq.m.
Pop......... 32,910

HAITI. ......H 2
(Fr.-Am. Rep.)
Area, 10 204 sq.m.
Pop. ...1,317,140

HAWAII H 30
(U. S Territory)
Area 6,449 sq.m.
Pop... ... 154,001

HONDURAS, H 1
(Sp.-Am. Rep.)
Area, 46,250 sq.m.
Pop. 744,901

HONDURAS, BRITISH H 1
(British Colony)
Area.. 7,562 sq.m.
Pop. 37,479

HONGKONG C 21
(British Colony)
Area . 29 sq.m.
Pop. 283,905

ICELAND. . .C 8
(Danish Colony)
Area, 39,756 sq.m.
Pop. 78 470

INDIA ......G 17
(Empire)
Ar., 1,766,642 sq.m.
Pop. ..294,361,056

ITALY. . E 11
(Kingdom)
Ar., 110,659 sq.m.
Pop. . 32,475,253

JAMAICA. .H 2
WITH TURKS AND CAICOS ISLANDS.
(British Colony)
Area.. 4,424 sq.m.
Pop. . 785,134

JAPAN ..F 23
(Empire)
Ar., 161,198 sq. m.
Pop.. . 46,760,815

KAMERUN ..I 11
(German Protectorate)
Ar., 191,130 sq m.
Pop. ... 3,500,000

KARICAL... H 18
(Fr. Dependen'y)
Area ...53 sq. m.
Pop.... ... 19,172

KOREA . F 22
(Empire)
Area, 82,000 sq.m.
Pop . 10,528,937

LEEWARD ISLANDS...H 3
(British Colony)
Area...701 sq. m.
Pop. . 127,536

LIBERIA.. .I 9
(Republic)
Area, 35,000 sq.m.
Pop......2,060,000

MADAGASCAR L 14
(French Colony)
Ar., 227,750 sq.m.
Pop. . 2,505,237

MADEIRA ISLANDS... F 8
(Portuguese Possession)
Area...505 sq. m.
Pop. . ..150,528

MAHE ..H 17
(Fr. Dependen'y)
Area 26 sq. m.
Pop. . .. 8,911

MARIANNE ISLANDS .H 23
(German Col'ny)
Area . .50 sq. m.
Pop. . 1,000

MARTINIQUE ISLAND .H 4
(French Colony)
Area 381 sq. m.
Pop. 187,692

MEXICO.... G 35
(Sp.-Am. Rep.)
Ar., 767,274 sq.m.
Pop. 13,605,819

MIDWAY ISLANDS G
(U.S. Possession)

THE WORLD
(Continued)

MONTENEGRO E 29
(Principality)
Area 3,630 sq.m.
Pop. 228,000

MOROCCO... F 27
(Empire)
Ar., 219,000 sq.m.
Pop.. .. 5,000,000

NATAL.. L 30
(British Colony)
Area, 36,170 sq.m.
Pop........ 929,970

NEPAL ......G 36
(Kingdom)
Area, 54,000 sq.m.
Pop......5,000,000

NETHERLANDS, THE ...D 28
(Kingdom)
Area, 12,648 sq.m.
Pop......5,104,137

NEWFOUNDLAND AND LABRADOR E 22
(British Colony)
Ar., 162,734 sq.m.
Pop. 220,984

NEW GUINEA ISLAND .J 6
(British Colony)
Area, 90,540 sq.m.
Pop. 350,000

NEW SOUTH WALES..M 6
(British Poss.)
Ar., 310,700 sq.m.
Pop. ..1,354,846

NEW ZEALAND N 9
(British Colony)
Ar., 104,471 sq.m.
Pop....... 772,719

NICARAGUA H 19
(Sp.-Am. Rep.)
Area, 49,200 sq.m.
Pop. 500,000

NORWAY ..C 29
(Kingdom)
Ar., 124,130 sq.m.
Pop......2,240,032

OMAN ...... G 33
(Indep'dt State)
Area, 82,000 sq.m.
Pop. 1,500,000

ORANGE RIVER COLONY..L 30
(British)
Area, 48,326 sq.m.
Pop. 207,503

PANAMA
(Republic)
Area 31,570
Pop. 340,000

PARAGUAY..L 22
(Sp.-Am. Rep.)
Ar., 157,000 sq. m.
Pop....... 530,103

PERSIA ......F 33
(Kingdom)
Ar., 628,000 sq.m.
Pop......7,653,600

PERU ....K 20
(Sp.-Am. Rep.)
Ar.. 695,733 sq.m.
Pop......2,660,881

PHILIPPINE ISLANDS...H 4
(U.S. Possession)
Ar., 127,853 sq.m.
Pop......6,987,686

PORTO RICO..G 21
(U. S. Territory)
Area..3,606 sq.m.
Pop....... 953,243

PORTUGAL..F 27
(Kingdom)
Area, 34 490 sq.m.
Pop......5,423,132

QUEENSLAND...L 6
(British Poss.)
Ar., 668,497 sq.m.
Pop....... 496,596

ROUMANIA. E 30
(Kingdom)
Area, 50,700 sq.m.
Pop......5,956,690

RUSSIA (ASIATIC)..C 4
(Empire)
Ar., 6,564,778 sq.m.
Pop.... 22,697,469

RUSSIA IN EUROPE..D 32
(Empire)
Ar., 2,095,616 sq.m.
Pop....106,264,136

SALVADOR..H 19
(Sp.-Am. Rep.)
Area. 7,225 sq. m.
Pop......1,006,848

NORTH AMERICA

ALASKA .... C 2 (U. S. Territory)	Area, 590,884 sq. m. Pop. 63,592
BAHAMAS ... K 6 (British Colony)	Area, 5,450 sq. m. Pop. 53,735
BARBADOS .. L 7 (British Colony)	Area .. 166 sq. m. Pop. 198,000
BERMUDAS . L 5 (British Colony)	Area .. 20 sq. m. Pop. 17,535
CANADA ...... I 3 (British Colony)	Area, 3,745,574 sq. m. Pop. 5,571,315
COSTA RICA . J 8 (Republic)	Area, 18,400 sq. m. Pop. 243,205
CUBA .... K 6 (Republic)	Area, 44,000 sq. m. Pop. 1,572,797
GREENLAND N 1 (Danish Colony)	Area, 46,740 sq. m. Pop. 11,895
GUATEMALA . I 7 (Republic)	Area, 48,290 sq. m. Pop. 1,842,134
HAITI ..... K 7 (Republic)	Area, 10,204 sq. m. Pop. 1,347,140
HONDURAS . J 7 (Republic)	Area, 46,250 sq. m. Pop. 744,901
HONDURAS, BRITISH J 7 (British Colony)	Area, 7,562 sq. m. Pop. 37,479
JAMAICA ... K 7 with Turks and Caicos Islands. (British Colony)	Area, 4,424 sq. m. Pop 639,491
MEXICO ... H 6 (Republic)	Area, 767,005 sq. m. Pop. 13,605,819
NEW FOUNDLAND AND LABRADOR M 4 (British Colony)	Area, 162,200 sq. m. Pop. 220,671
NICARAGUA J 7 (Republic)	Area, 49,200 sq. m. Pop. 500,000
PANAMA ..... J 8 (Republic)	Area, 31,570 sq. m. Pop. 340,000
PORTO RICO L 7 (United States Territory)	Area, 3,606 sq. m. Pop. 953,243
SALVADOR .. J 7 (Republic)	Area, 7,225 sq. m. Pop. 1,006,848
SANTO DOMINGO K 7 (Republic)	Area, 18,045 sq. m. Pop. 610,000
UNITED STATES I 5 (Republic)	Ar., 3,622,933 sq. m. Pop. 76,085,794

UNTED STATES

Capital, Washington . T 5
Pop. 278,718

ALABAMA ... Q 7
Area, 52,250 sq. m.
Pop. 1,828,697
Cap. Montgomery Q 8

ARIZONA G 7
Area, 113,020 sq. m.
Pop. 122,931
Cap. Phœnix G 7

ARKANSAS .. N 6
Area, 53,850 sq. m.
Pop. 1,311,564
Cap. Little Rock N 7

CALIFORNIA B 6
Area, 158,360 sq. m.
Pop. 1,485,053
Cap. Sacramento C 5

COLORADO ... I 5
Area, 103,925 sq. m.
Pop. 539,700
Cap. Denver J 5

CONNECTICUT V 4
Area, 4,990 sq. m.
Pop. 908,420
Cap. Hartford V 4

DELAWARE . U 5
Area, 2,050 sq. m.
Pop. 184,735
Cap. Dover .. U 5

DISTRICT OF COLUMBIA .. U 5
Area 70 sq. m.
Pop. 278,718

FLORIDA. S 9
Area, 58,680 sq. m.
Pop. 528,542
Cap. Tallahassee R 8

GEORGIA .... R 7
Area, 59,475 sq. m.
Pop. 2,216,331
Cap. Atlanta . R 7

IDAHO ..... F 3
Area, 84,800 sq. m.
Pop. 161,772
Cap. Boise .... E 3

ILLINOIS. ... P 4
Area, 56,650 sq. m.
Pop. 4,821,550
Cap. Springfield P 5

INDIANA ..... Q 5
Area, 36,350 sq. m.
Pop. 2,516,462
Cap. Indianapolis .. Q 4

INDIAN TER. M 6
Area, 31,400 sq. m.
Pop. 392,060

IOWA .... N 4
Area, 56,025 sq. m.
Pop. 2,231,853
Cap. Des Moines N 4

KANSAS ...... L 5
Area, 82,080 sq. m.
Pop. 1,470,495
Cap. Topeka M 5

KENTUCKY .. Q 6
Area, 40,400 sq. m.
Pop. 2,147,174
Cap. Frankfort R 5

LOUISIANA .. O 8
Area, 48,720 sq. m.
Pop. 1,381,625
Cap. Baton Rouge .. O 8

MAINE ...... X 2
Area, 33,040 sq. m.
Pop. 694,466
Cap. Augusta X 3

MARYLAND. U 5
Area, 12,210 sq. m.
Pop. 1,188,044
Cap. Annapolis U 5

MASSACHUSETTS .. W 4
Area, 8,315 sq. m.
Pop. 2,805,346
Cap. Boston. W 4

MICHIGAN ... Q 3
Area, 58,915 sq. m.
Pop. 2,530,016
Cap. Lansing R 4

MINNESOTA N 2
Area, 83,365 sq. m.
Pop. 1,751,394
Cap. St. Paul O 2

MISSISSIPPI. P 7
Area, 46,810 sq. m.
Pop. 1,551,270
Cap. Jackson P 8

MISSOURI ... N 5
Area, 69,415 sq. m.
Pop. 3,106,665
Cap. Jefferson City .. N 5

MONTANA ... G 2
Area, 146,080 sq. m.
Pop 243,329
Cap. Helena . G 2

NEBRASKA L 4
Area, 77,510 sq. m.
Pop. 1,066,300
Cap. Lincoln M 4

NEVADA E 5
Area, 110,700 sq. m.
Pop. 42,335
Cap. Carson City D 5

NEW HAMPSHIRE . W 3
Area, 9,305 sq. m.
Pop. 411,588
Cap. Concord W 3

NEW JERSEY V 4
Area, 7,815 sq. m.
Pop. 1,883,669
Cap. Trenton V 4

NEW MEXICO I 7
Area, 122,580 sq. m.
Pop. 195,310
Cap. Santa Fé I 6

NEW YORK U 3
Area, 49,170 sq. m.
Pop. 7,268,891
Cap. Albany V 3

N. CAROLINA T (
Area, 52,250 sq. m
Pop. 1,893,81(
Cap. Raleigh . T (

N. DAKOTA .. K 2
Area, 70,795 sq. m.
Pop. 319,146
Cap. Bismarck K 2

OHIO .... R 4
Area, 41,060 sq. m.
Pop. 4,157,545
Cap. Columbus S 5

OKLAHOMA TER L 6
Area, 39,030 sq. m.
Pop. 398,331
Cap. Guthrie M 6

OREGON ..... D 3
Area, 96,030 sq. m.
Pop. 413,536
Cap. Salem. B 3

PENNSYLVANIA . T 4
Area, 45,215 sq. m.
Pop. 6,302,115
Cap. Harrisburg U 4

RHODE ISLAND .. W 4
Area, 1,250 sq. m.
Pop. 428,556
Cap. Providence W 4

S. CAROLINA S 7
Area, 30,570 sq. m.
Pop. 1,340,316
Cap. Columbia S 7

S. DAKOTA .. K 3
Area, 77,650 sq. m.
Pop. 401,570
Cap. Pierre .. K 3

TENNESSEE. Q 6
Area, 42,050 sq. m.
Pop. 2,020,616
Cap. Nashville Q 6

TEXAS .... L 8
Area, 265,780 sq. m
Pop. 3,048,710
Cap. Austin. L 8

UTAH ...... G 5
Area, 84,970 sq. m.
Pop. 276,749
Cap. Salt Lake City G 4

VERMONT. W 3
Area, 9,565 sq. m.
Pop. 315,641
Cap. Montpelier W 3

VIRGINIA . T 5
Area, 42,450 sq. m.
Pop. 1,854,184
Cap. Richmond U 5

WASHINGTON C 2
Area, 69,180 sq. m.
Pop. 518,103
Cap. Olympia B 2

W. VIRGINIA S 5
Area, 24,780 sq. m.
Pop. 958,800
Cap. Charleston S 5

WISCONSIN P 3
Area, 56,040 sq. m.
Pop. 2,228,949
Cap. Madison O 3

WYOMING H 3
Area, 97,890 sq. m.
Pop. 92,531
Cap. Cheyenne I 4

MAINE

Land area, 29,895 sq. m.
Water area, 3,145 sq. m.
Pop. 1900. 694,466
Male 350,995
Female 343,471
Native 601,136
Foreign 93,330
White 692,226
African 1,319
Chinese 119
Japanese 4
Indian 798

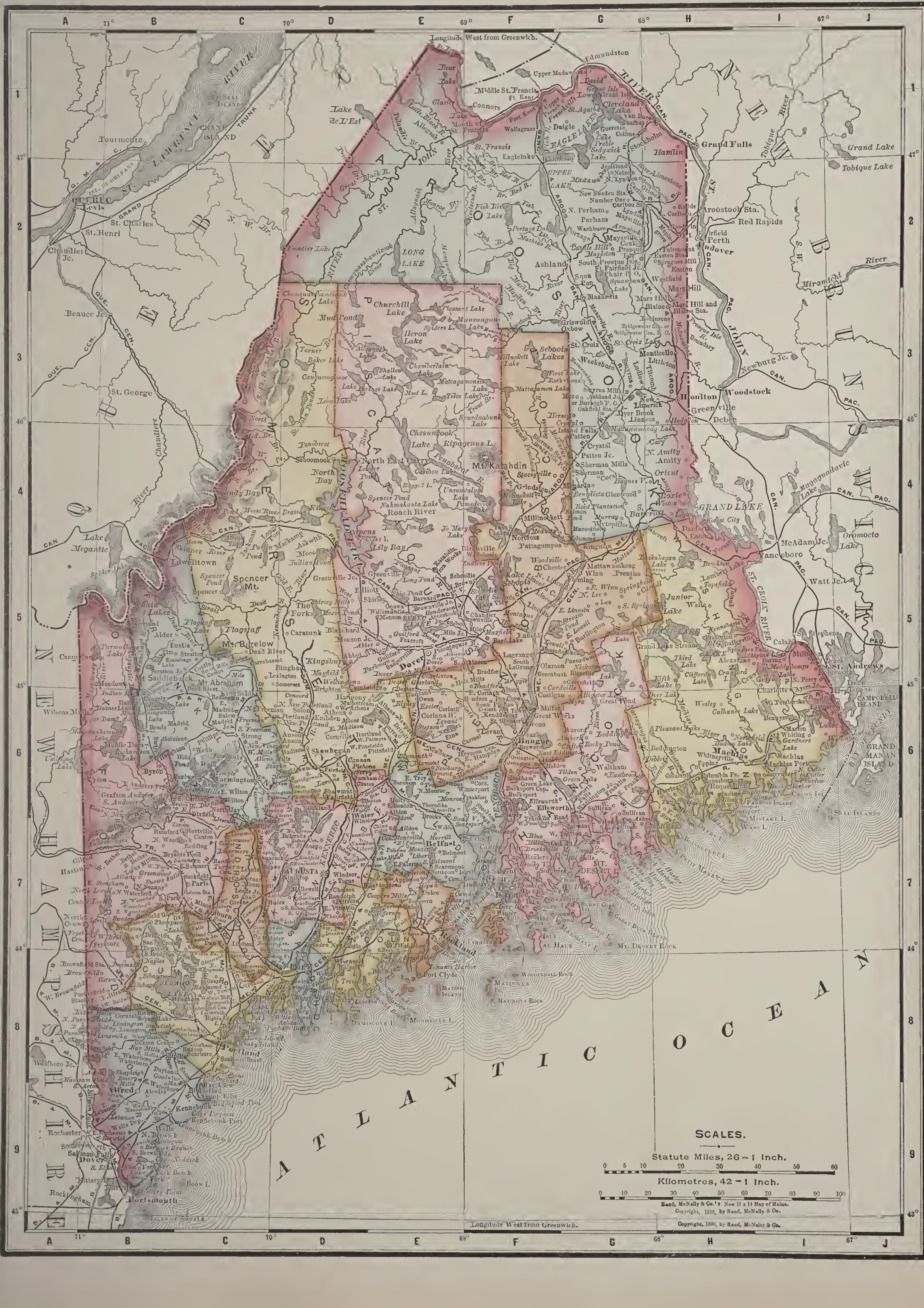
COUNTIES.

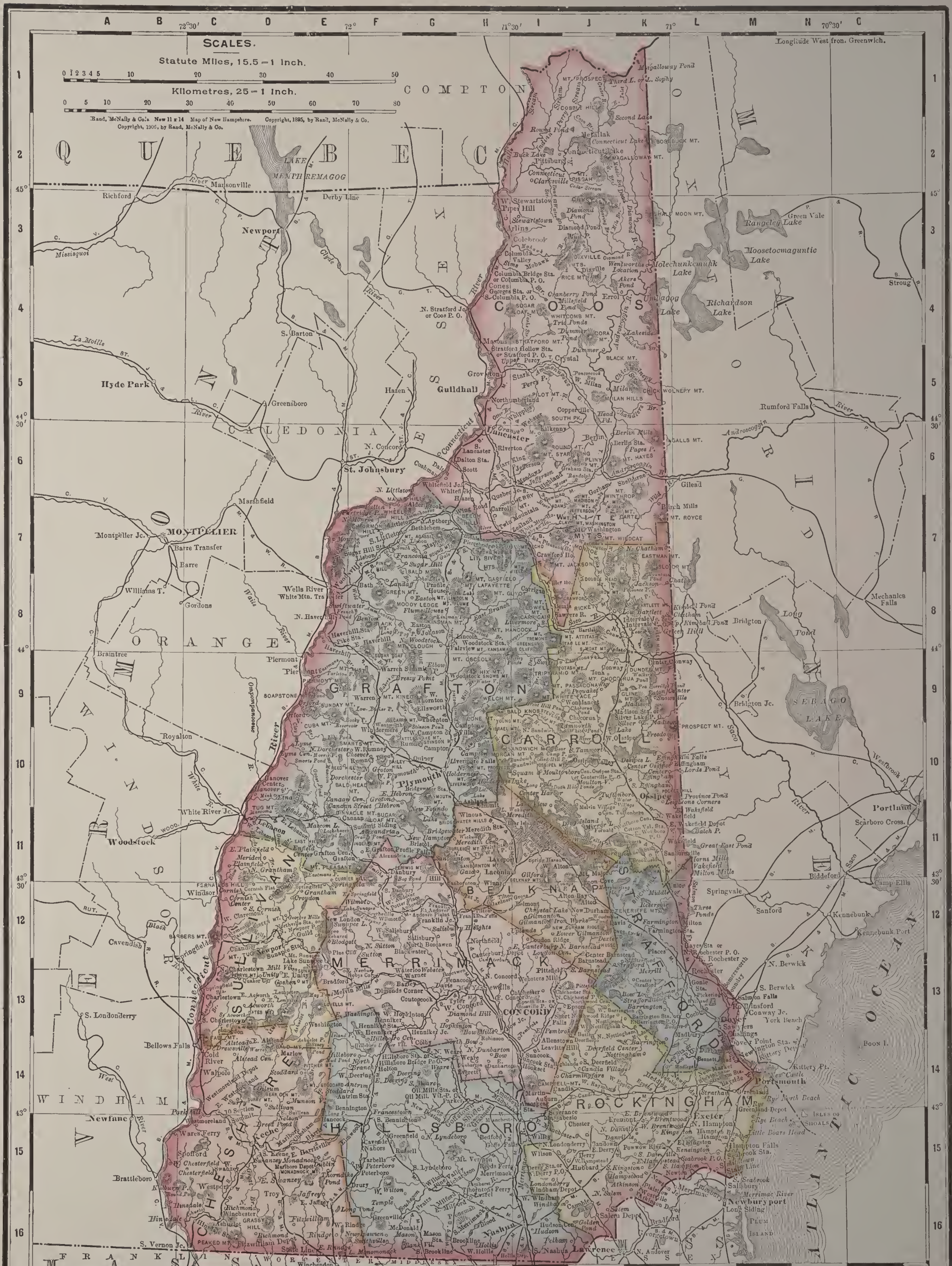
Androscoggin	C 7
Aroostook	F 2
Cumberland	C 8
Franklin	B 5
Hancock	G 6
Kennebec	D 7
Knox	E 7
Lincoln	D 7
Oxford	B 6
Penobscot	F 5
Piscataquis	E 4
Sagadahoc	D 8
Somerset	C 4
Waldo	E 6
Washington	H 5
York	B 8

CHIEF CITIES.

Pop.– Thousands.

50	Portland	C 8
24	Lewiston	C 7
22	Bangor	F 6
16	Biddeford	C 9
13	Auburn	C 7
12	Augusta	D 7
10	Bath	D 8
9	Waterville	D 6
8	Rockland	E 7
8	Calais	I 5
7	Westbrook	C 8
6	S. Portland	C 8
6	Saco	C 8
6	Sanford	B 9
6	Oldtown	F 6
6	Gardiner	D 7
5	Eastport	I 6
5	Brunswick	D 8
5	Brewer	F 6
5	Caribou	G 2
5	Houlton	H 3
5	Belfast	E 7
4	Eden	G 7
4	Ellsworth	G 6
4	Skowhegan	D 6
4	Rumford	B 7
4	Lisbon	C 7
3	Orono	F 6
3	Kennebunk	C 9
3	S. Berwick	B 9
3	Waldoboro	E 7
3	Chelsea	D 7
3	Lubec	I 6
3	Dexter	E 5
3	Kittery	B 9
3	Camden	E 7
3	Jay	C 6
3	Hallowell	D 7
3	Thomaston	E 7
3	York	B 9
3	Rumford Falls	C 6
3	Bristol	E 8
3	Gorham	C 8
3	Fort Kent	F 1
3	Bar Harbor	G 7
3	Livermore Falls	C 7
3	Millinocket	F 4
2	Vinalhaven	F 7
2	Bucksport	F 6
2	Rockport	E 7
2	Berwick	B 9
2	Winslow	D 7
2	Yarmouth	C 8
2	Fairfield	D 6
2	Pittsfield	E 6
2	St. George	E 7
2	Hampden	F 6
2	East Livermore	C 7
2	Jonesport	H 6
2	Kennebunkport	C 9
2	Topsham	D 8
2	Winthrop	D 7
2	Machias	I 6
2	Warren	E 7
2	Vassalboro	D 7
2	Richmond	D 7
2	Deer Isle	F 7
2	Norway	B 7
2	Tremont	F 7
2	Wells	B 9
2	Springvale	B 9
2	Boothbay Harbor	D 8
2	Millbridge	H 6
2	Oakland	D 6
2	Dover	E 5
2	Vanburen	H 1
2	Scarboro	C 8
2	Cherryfield	G 6
2	Madison	D 6
2	Turner	C 7
2	Anson	D 6
2	Bluehill	F 7
2	Boothbay	D 8
2	North Berwick	B 9
2	Mechanic Falls	C 7
2	Pembroke	I 6
2	Poland	C 7
2	Stonington	F 7
2	Wilton	C 6
2	Foxcroft	E 5
2	Winterport	F 6
2	Mount Desert	G 7
2	Lisbon Falls	C 8
2	Brownville	E 5
2	Bridgton	B 7
2	Guilford	E 5
2	East Machias	I 6
2	Falmouth	C 8
2	Standish	B 8
1	Norridgewock	D 6
1	Fort Fairfield	H 2
1	Eliot	B 9
1	South Paris	C 7
1	South Thomaston	E 7
1	Cumberland	C 8
1	St. Agatha	G 1
1	Gray	C 8
1	China	E 7
1	Searsport	F 7
1	Lebanon	B 9
1	Monticello	H 3





NEW HAMPSHIRE

Land area, 9,005 sq. m.
Water area, 300 sq. m.
Pop. 1900 411,588
Male 205,379
Female 206,209
Native 323,481
Foreign 88,107
White 410,791
African .. 662
Chinese 112
Japanese 1
Indian 22

COUNTIES.

Belknap	J 12
Carroll	J 10
Cheshire	C 15
Coos	J 4
Grafton	H 9
Hillsboro	H 15
Merrimack	H 13
Rockingham	K 14
Strafford	K 13
Sullivan	E 12

CHIEF CITIES.

Pop.- Thousands.

57	Manchester	H 14
24	Nashua	H 16
20	Concord	I 13
13	Dover	L 13
11	Portsmouth	M 14
9	Keene	D 15
9	Berlin	J 6
8	Rochester	L 13
8	Laconia	H 11
7	Somersworth	L 13
6	Claremont	D 12
6	Franklin	G 12
5	Lebanon	D 11
5	Exeter	L 15
4	Littleton	F 7
4	Milford	G 16
4	Derry	J 15
3	Franklin Falls	H 12
3	Haverhill	E 8
3	Lancaster	H 6
3	Pembroke	I 14
3	Conway	J 9
3	Newport	D 12
3	Newmarket	L 14
3	Lakeport	H 11
3	Walpole	C 14
3	Goffstown	H 14
3	Peterboro	F 15
2	Suncook	I 14
2	Wolfboro	J 11
2	Winchester	C 16
2	Farmington	K 12
2	Hillsboro	E 14
2	Lisbon	F 7
2	Whitefield	H 6
2	Pittsfield	I 13
2	Salem	J 16
2	Northumberland	H 5
2	Plymouth	G 10
2	Hinsdale	C 16
2	Tilton	H 12
2	Jaffrey	E 16
2	Hanover	D 10
2	Colebrook	I 3
2	Enfield	E 11
2	Gorham	J 6
2	Meredith	I 11
2	Wilton	G 15
2	Hookset	I 14
2	Wakefield	K 11
2	Epping	K 14
2	Milton	L 12
2	Greenville	F 16
2	Bristol	G 11
2	Swanzey	D 15
2	Weare	G 14
2	Troy	D 16
2	Marlboro	D 15
2	Gonic (Ward 3 of Rochester)	L 13
2	Henniker	F 13
1	Alton	J 12
1	Hillsboro Bridge	F 14
1	Woodsville	E 8
1	Seabrook	L 15
1	Allenstown	I 14
1	Ossipee	K 10
1	Charlestown	C 13
1	Boscawen	G 13
1	Canaan	F 11
1	Londonderry	I 15
1	Antrim	F 14
1	Warner	G 13
1	Northwood	J 13
1	Belmont	I 12
1	Ashland	H 10
1	Bethlehem	G 7
1	Hudson	I 16
1	Merrimack	H 15
1	Amherst	H 15
1	Northfield	H 12
1	Hampton	L 15
1	Barrington	K 13
1	Groveton	H 5
1	Salmon Falls	M 13
1	Andover	G 12
1	Deerfield	J 14
1	Stewartstown	I 3
1	Bedford	H 15
1	Rye	M 14
1	Milan	K 5
1	Kingston	K 15
1	E. Rochester (Ward 1 of Rochester)	L 13
1	Plainfield	D 11
1	Gilmanton	I 12
1	Raymond	J 14
1	Jefferson	I 6
1	Lyme	E 10
1	Sandwich	I 10
1	Barnstead	J 13
1	Candia	I 14
1	Tamworth	J 10
1	Strafford	K 13
1	Plaistow	K 16
1	Bartlett	J 8
1	Bath	F 8
1	New Boston	G 15
1	Berlin Mills	K 6
1	E. Jaffrey	E 16
1	Campton	H 10
1	Durham	L 14
1	Fitzwilliam	E 16
1	Chesterfield	C 15

VERMONT

Land area, 9,135 sq. m.
Water area, 430 sq. m.

Pop. 1900	343,641
Male	175,138
Female	168,503
Native	298,894
Foreign	44,747
White	342,771
African	826
Chinese	39
Indian	5

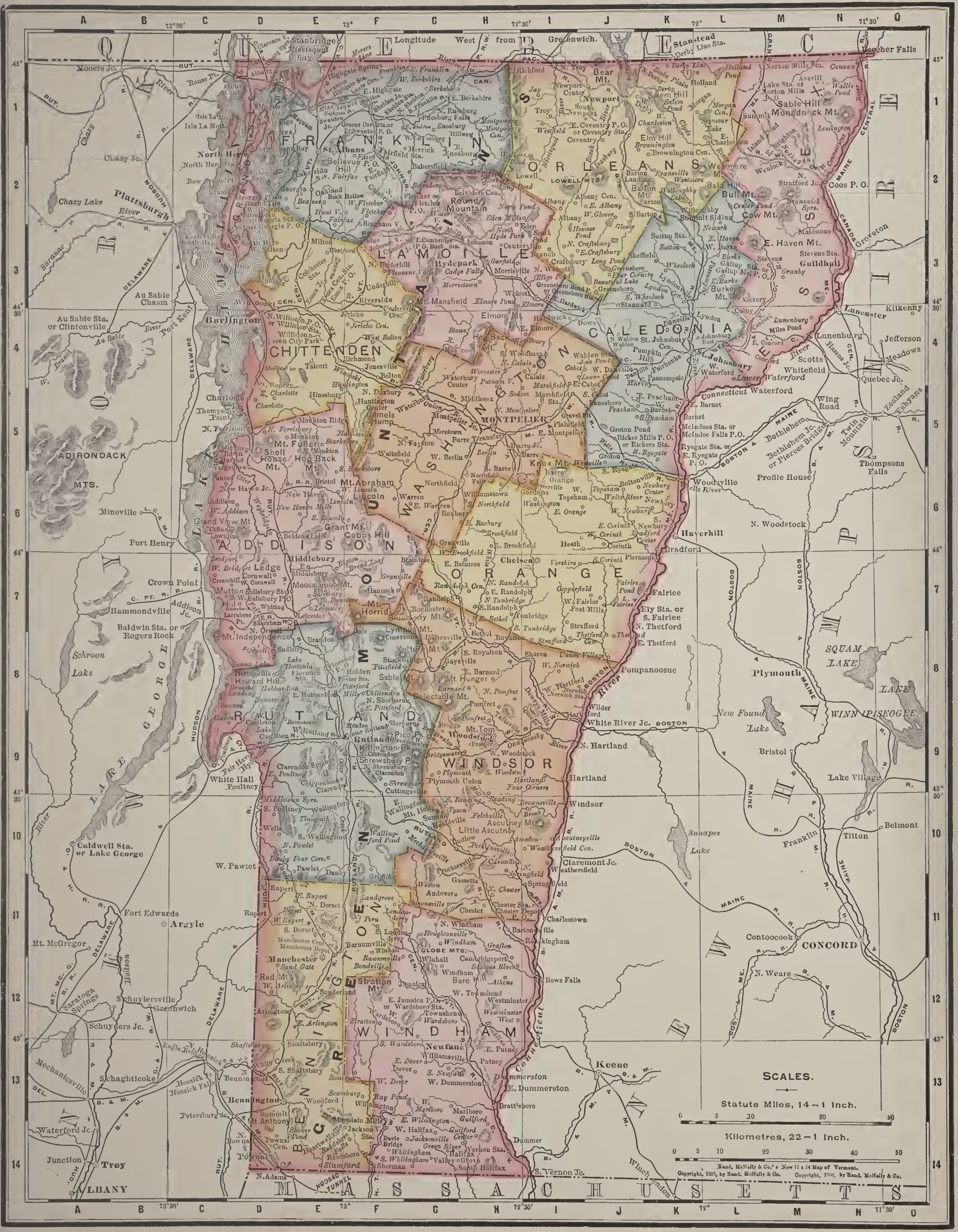
COUNTIES.

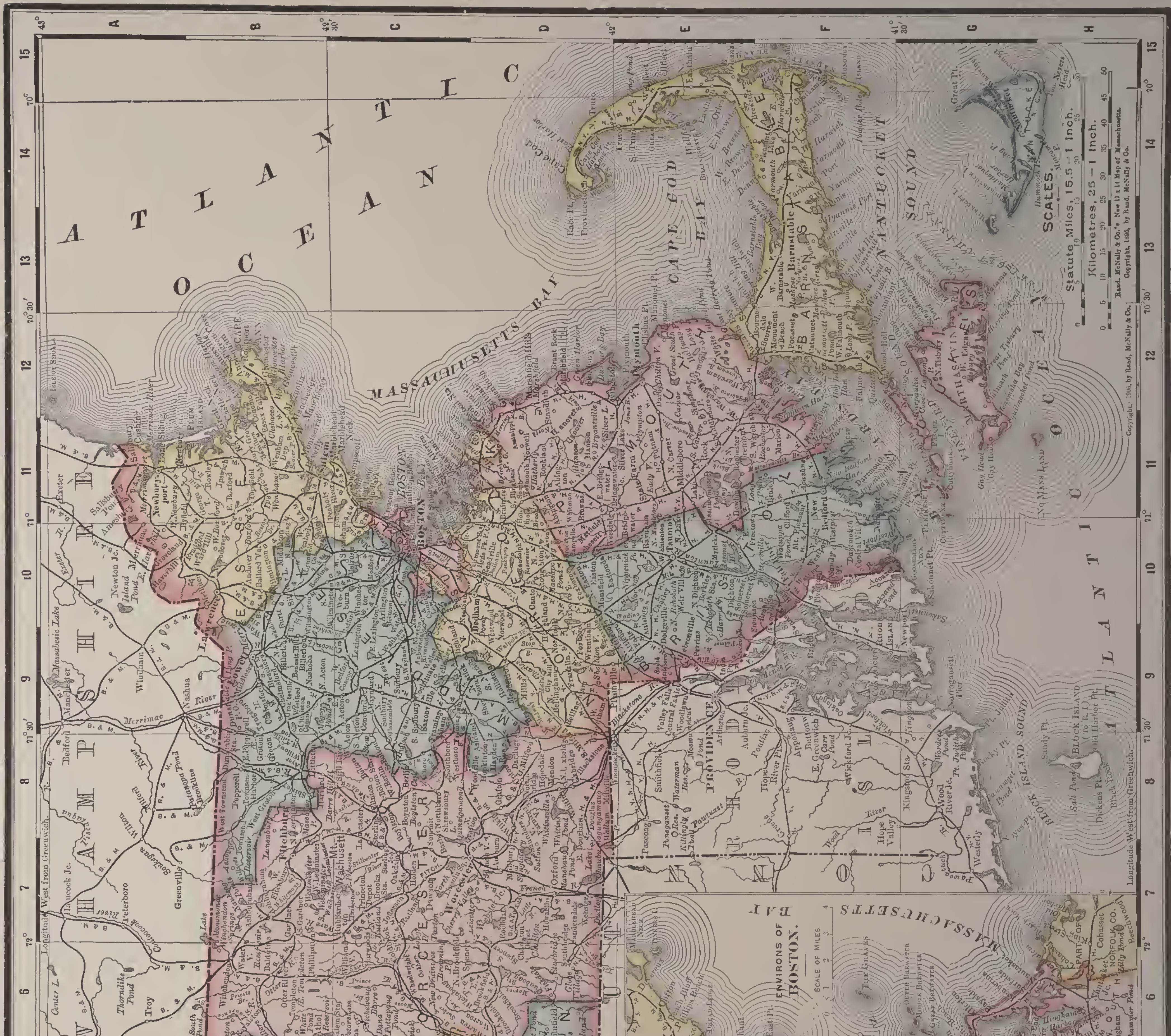
Addison	D 6
Bennington	E 12
Caledonia	K 4
Chittenden	E 4
Essex	M 2
Franklin	F 1
Grand Isle	D 2
Lamoille	G 3
Orange	I 7
Orleans	J 2
Rutland	E 9
Washington	G 5
Windham	G 12
Windsor	H 9

CHIEF CITIES.

Pop.—Thousands.

19	Burlington	D 4
11	Rutland	F 9
8	Barre	I 5
6	Montpelier	H 5
6	St. Albans	E 2
6	Rockingham	I 11
6	St. Johnsbury	L 4
6	Bennington	D 13
5	Colchester	D 3
5	Brattleboro	H 3
4	Bellows Falls	I 12
4	Hartford	I 9
4	Winooski	D 3
3	Poultney	D 9
3	Lyndon	L 4
3	W. Rutland	E 9
3	Brandon	E 8
3	Morristown	G 3
2	Fairhaven	D 9
2	Essex	E 3
2	Newbury	K 6
2	Castleton	D 9
2	Bristol	E 6
2	Enosburg	G 1
2	Springfield	I 11
2	Proctor	E 8
2	Highgate	E 1
2	Manchester	E 12
2	Middlebury	E 7
2	Montgomery	H 1
2	Newport	J 1
2	Pittsford	E 8
2	Shaftsbury	D 13
2	Fairfield	F 2
2	Milton	E 3
2	Barnet	K 5
2	Vergennes	D 5
2	Pawlet	E 10
2	Windsor	I 10
2	Danville	K 4
2	Ferrisburg	D 5
2	Bethel	H 8
2	Williamstown	H 6
2	Cambridge	F 3
2	Waterbury	G 5
2	Wallingford	E 10
2	Randolph	G 7
2	Richford	G 1
2	Northfield	G 6
1	Island Pond	M 2
1	Whiteriver Junction	J 9
1	Dorset	D 11
1	Alburg	D 1
1	Troy	I 1
1	Ludlow	G 10
1	Royalton	H 8
1	Jericho	F 4
1	Cavendish	H 10
1	Sheldon	F 1
1	Hartland	I 9
1	Fairfax	E 2
1	Hardwick	I 4
1	Berkshire	G 1
1	Norwich	I 8
1	Westminster	H 12
1	Woodstock	H 9
1	Georgia	E 2
1	Lyndonville	K 3
1	Morrisville	H 3
1	Charlotte	D 5
1	Craftsbury	I 3
1	Rochester	G 7
1	Thetford	J 8
1	Hinesburg	E 5
1	Shelburne	D 4
1	Arlington	D 12
1	Shoreham	D 8
1	Burke	L 3
1	Williston	E 4
1	Swanton	E 1
1	Bakersfield	G 2
1	Lincoln	E 6
1	Orwell	D 8
1	Franklin	F 1
1	Essex Junction	E 3
1	Underhill	F 3
1	Concord	M 4
1	Topsham	J 6
1	Newhaven	E 6
1	Calais	I 4
1	Weathersfield	I 10
1	Chelsea	I 7
1	Wolcott	I 3
1	E. Montpelier	I 5
1	Groton	J 5
1	Richmond	F 4
1	Barton	K 2
1	Whitingham	F 14
1	Marshfield	I 1
1	Albany	I 2
1	Berlin	H 5
1	Strafford	J 7
1	Mount Holly	G 10
1	Brookfield	H 5
1	Ryegate	K 6





MASS.

Land area, 8,040 sq. m.
Water area, 275 sq. m.
Pop. 1900 2,805,346
Male 1,367,474
Female 1,437,872
Native 1,959,022
Foreign 846,324
White 2,769,764
African 31,974
Chinese 2,968
Japanese 53
Indian 587

COUNTIES.

Barnstable	F	13
Berkshire	C	2
Bristol	E	10
Dukes	G	12
Essex	B	11
Franklin	B	4
Hampden	D	4
Hampshire	C	4
Middlesex	C	9
Nantucket	G	11
Norfolk	D	10
Plymouth	E	11
Suffolk	C	10
Worcester	C	7

CHIEF CITIES AND TOWNS.

Pop.—Thousands.

561	Boston	C	10
118	Worcester	D	7
105	Fall River	F	10
95	Lowell	B	9
92	Cambridge	C	10
69	Lynn	C	11
63	Lawrence	B	10
62	New Bedford	F	11
62	Springfield	D	4
62	Somerville	C	10
46	Holyoke	D	4
40	Brockton	D	10
37	Haverhill	A	10
36	Salem	B	11
34	Chelsea	C	10
34	Malden	C	10
34	Newton	C	10
32	Fitchburg	B	7
31	Taunton	E	10
26	Gloucester	B	12
24	Everett	C	10
24	N. Adams	B	2
24	Quincy	C	11
23	Waltham	C	9
22	Pittsfield	C	1
20	Brookline	C	10
19	Chicopee	D	4
19	Northampton	C	4
18	Medford	C	10
14	Newburyport	A	11
14	Woburn	C	10
14	Beverly	B	11
14	Clinton	C	8
14	Marlboro	C	8
13	Hydepark	D	10
13	Melrose	C	10
12	Leominster	B	7
12	Westfield	D	3
12	Peabody	B	11
11	Milford	D	8
11	Attleboro	E	9
11	Weymouth	B	11
11	Framingham	C	9
11	Adams	B	2
11	Gardner	B	7
10	Revere	F	4
10	Southbridge	D	6
10	Watertown	C	10
10	Plymouth	E	12
9	Natick	C	9
9	Amesbury	A	11
9	Wakefield	B	10
9	Webster	D	7
9	Arlington	C	10
9	Danvers	B	11
8	Ware	C	6
8	Greenfield	B	4
8	Palmer	D	5
8	Spencer	C	6
8	Marblehead	C	11
8	Methuen	B	10
7	Dedham	D	10
7	N. Attleboro	E	9
7	Winchester	C	10
7	W. Springfield	D	4
7	Athol	B	5
7	Northbridge	D	8
7	S. Framingham	C	9
7	Middleboro	E	11
7	Andover	B	10
7	Milton	C	10
6	Stoneham	C	10
6	Whitman	D	11
6	Montague	B	4
6	Winthrop	F	4
6	Braintree	D	10
6	Great Barrington	D	1
6	Bridgewater	D	1
6	Blackstone	D	8
6	Concord	C	9
6	Easthampton	C	4
6	Orange	B	5
5	Campello	D	10
5	Norwood	D	10
5	Hudson	C	8
5	Stoughton	D	10
5	Westboro	C	8
5	Rockland	D	11
5	Saugus	C	11
5	Wellesley	C	9
5	Hingham	D	11
5	Amherst	C	4
5	Franklin	D	9
5	Williamstown	B	2
5	Winchendon	B	6
5	Chicopee Falls	D	4
5	Reading	B	10
5	Grafton	D	8
5	Easton	D	10
5	Ipswich	B	11
5	Turners Falls	B	5
5	Rockport	B	12
5	N. Brookfield	C	6
5	Canton	D	10
5	Swampscott	C	11
5	S. Hadley	D	4

RHODE ISLAND

Land area, 1,053 sq. m.
Water area, 197 sq. m.

Pop. 1900	428,556
Male	210,516
Female	218,040
Native	294,037
Foreign	134,519
White	419,050
African	9,092
Chinese	366
Japanese	13
Indian	35

COUNTIES.

Bristol	K 19
Kent	K 10
Newport	O 20
Providence	E 8
Washington	Q 9

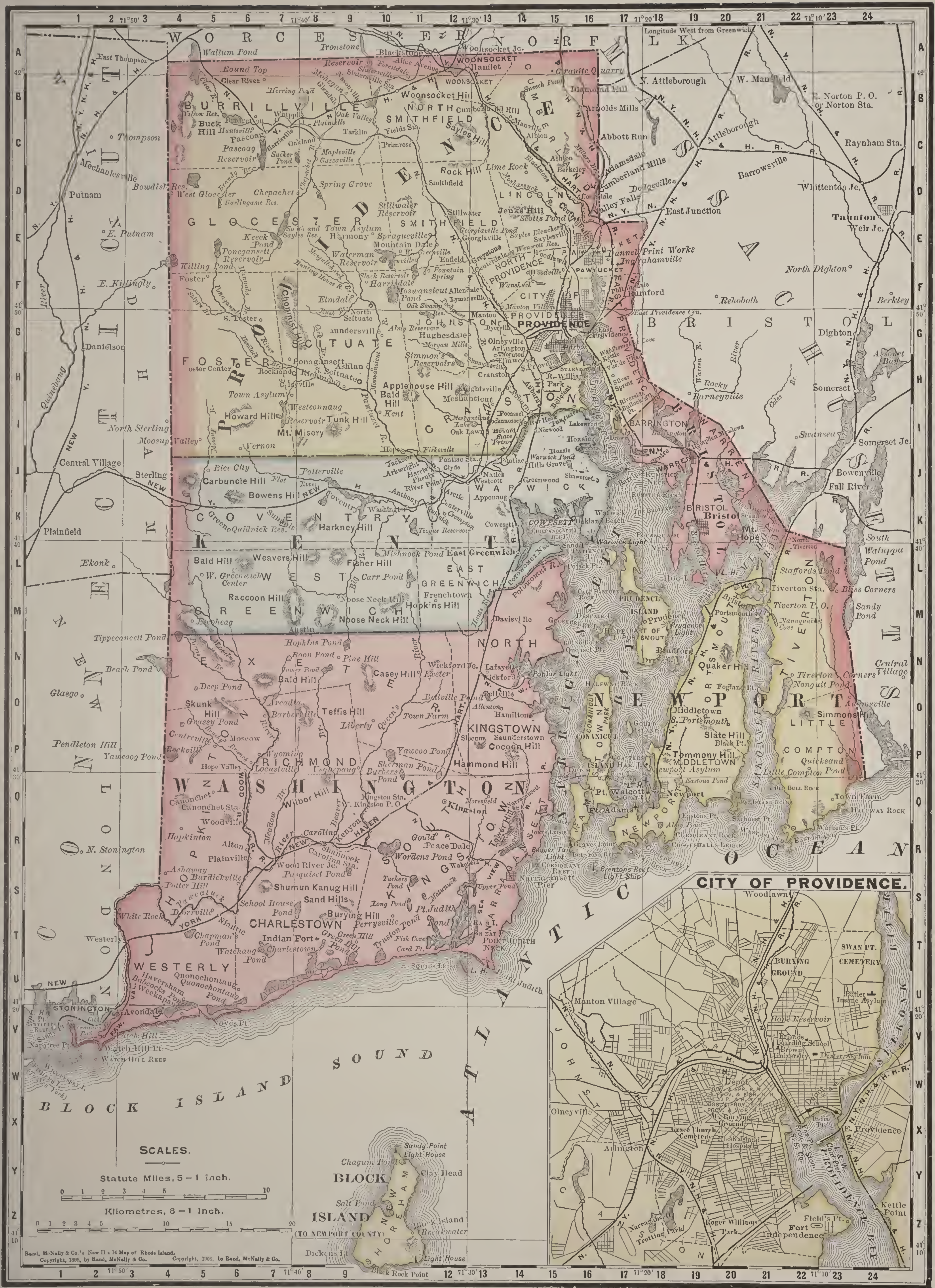
CHIEF CITIES

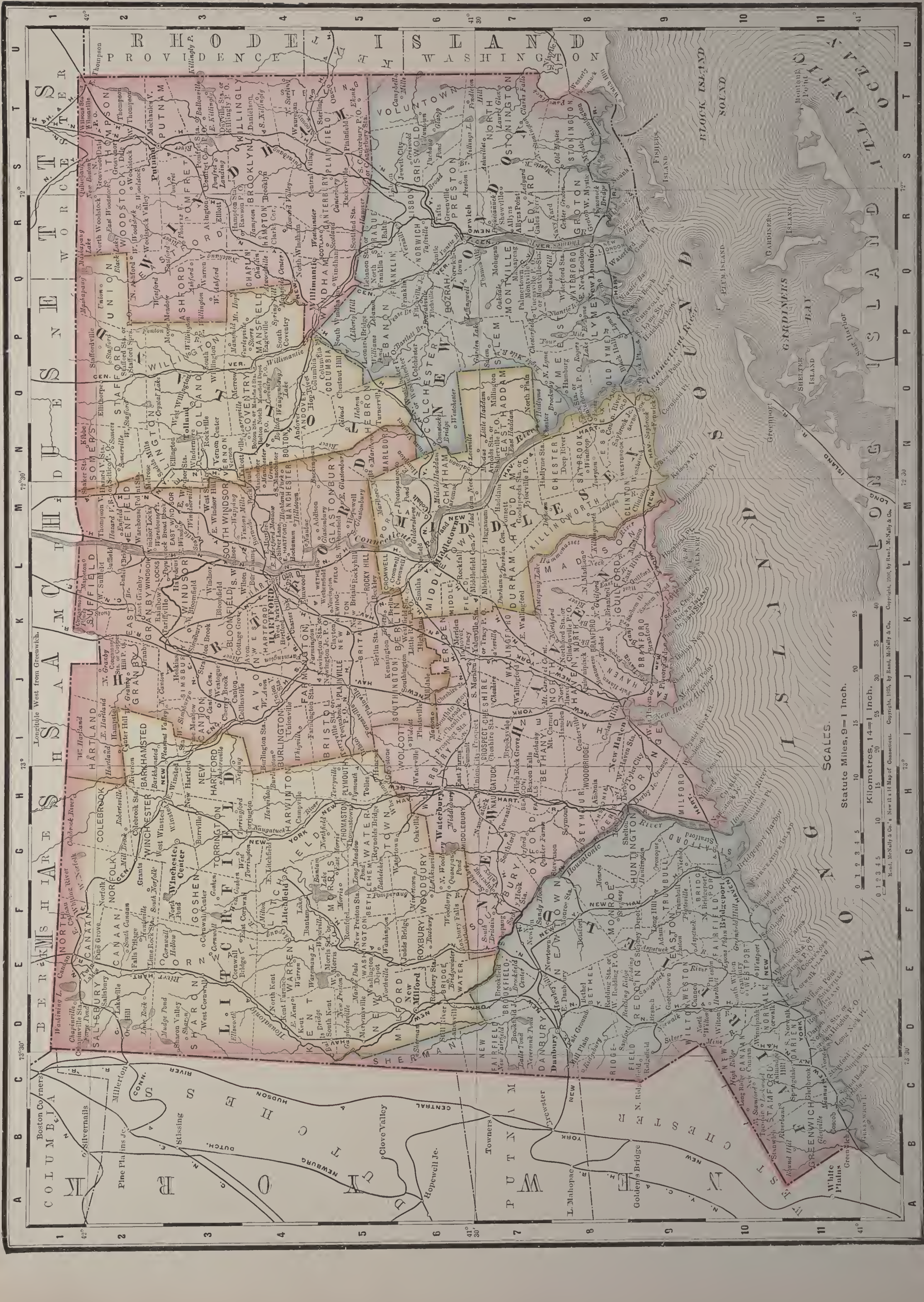
Pop.—Thousands.

176	Providence	G 15
39	Pawtucket	F 16
28	Woonsocket	A 12
22	Newport	Q 19
21	Warwick	K 16
18	Central Falls	E 16
13	Cranston	H 14
12	East Providence	G 16
8	Westerly	T 2
7	Bristol	K 19
5	Coventry	J 9
5	Warren	J 19
5	Manville	C 14
5	Lonsdale	D 16
3	Valley Falls	D 16
3	Tiverton	M 22
3	East Greenwich	L 14
3	Hopkinton	R 5
2	Natick	J 13
2	Phenix	J 11
2	Wakefield	R 13
2	Ashton	C 15
2	Smithfield	D 12
2	Portsmouth	M 20
2	Pascoag	C 6
2	River Point	J 12
2	Harrisville	C 7
2	Auburn	I 15
2	Narragansett	S 14
1	Jamestown	Q 17
1	Middletown	D 19
1	Block Island	Z 11
1	Hope Valley	P 6
1	Chepachet	D 7
1	Arctic	J 12
1	Riverside	H 17
1	Centerville	K 12
1	Saylesville	E 15
1	Anthony	K 11
1	Foster	F 4
1	Slatersville	B 10
1	Barrington	I 18
1	Little Compton	P 22
1	Wickford	N 14
1	Pontiac	J 14
1	Crompton	K 12
1	Georgiaville	E 13
1	Peacedale	R 12
1	Charlestown	T 7

Pop.—Hundreds.

9	Greenville	E 11
9	Albion	C 14
9	Fiskeville	J 11
9	Apponaug	K 13
8	Exeter	N 12
8	Ashaway	S 4
7	Manton	G 13
7	Oakland	C 8
7	Thornton	H 14
7	Centerdale	F 13
7	Washington	K 10
6	Hope	J 10
6	N. Scituate	F 10
6	Allenton	O 13
6	N. Tiverton	L 22
6	Bridgeton	B 6
6	Whiterock	S 2
5	Kingston	Q 12
5	Rumford	F 17
5	Arlington	G 14
5	Drownville	I 17
5	Davisville	M 14
5	Phillipsdale	F 17
4	Lafayette	N 13
4	Wyoming	P 7
4	Nasonville	B 9
4	Niantic	T 5
4	Rockville	P 5
4	Greene	K 5
4	Hillsgrove	J 14
4	Carolina	R 8
4	Barrington Center	J 18
4	Enfield	E 12
4	Forestdale	B 10
4	S. Scituate	H 9
3	E. Providence Center	F 17
3	Limerock	D 14
3	Rockland	H 7
3	Lymansville	F 13
3	Lakewood	I 15
3	Arcadia	O 7
3	Glendale	B 8
3	Shannock	R 8
3	Potterhill	S 4
2	Tiverton Four Corners	N 22
2	Foster Center	H 5
2	S. Portsmouth	O 20
2	Kenyon	R 9
2	Ashland	H 9
2	Slocum	P 13
2	Adamsville	O 24
2	Diamond Hill	B 16
2	Hamilton	O 11
2	Norwood	I 15
2	Watch Hill	V 3





CONNECTICUT

Land area,	4,845 sq. m.
Water area,	145 sq. m.
Pop., 1900	908,420
Male	454,294
Female	454,126
Native	670,210
Foreign	238,210
White	892,424
African	15,226
Chinese	599
Japanese	18
Indian	153

COUNTIES.

Fairfield	F	10
Hartford	K	4
Litchfield	F	3
Middlesex	M	7
New Haven	J	7
New London	R	7
Tolland	O	4
Windham	S	3

CHIEF CITIES,

Towns, Boroughs and Villages.

Pop.—Thousands.			
108	New Haven	I	8
80	Hartford	K	4
71	Bridgeport	F	10
46	Waterbury	H	6
26	New Britain	K	5
24	Meriden	K	6
18	New London	Q	8
17	Norwich	R	6
17	Danbury	D	8
16	Stamford	C	11
13	Ansonia	H	8
11	Manchester	M	4
11	Naugatuck	H	7
10	Middletown	L	6
9	Willimantic	Q	4
8	Torrington	G	4
8	Derby	G	8
7	Rockville	N	3
7	South Manchester	M	4
7	Winsted	H	3
7	Wallingford	J	7
7	Enfield	M	2
7	Putnam	S	2
7	South Norwalk	D	11
6	Thompson	T	2
6	East Hartford	L	4
6	Bristol	I	5
6	Norwalk	D	10
6	Groton	R	8
6	Huntington	G	9
5	Westhaven	I	9
5	Plainfield	S	5
5	New Milford	D	6
5	Hamden	J	8
4	Fairfield	F	10
4	Stafford	P	2
4	Westport	E	10
4	Portland	L	6
4	Thompsonville	M	2
4	Milford	H	10
4	Stratford	G	10
4	Windsor	L	3
4	Seymour	H	8
4	Suffield	L	2
3	Salisbury	D	2
3	Berlin	K	5
3	New Hartford	H	3
3	Southington	J	6
3	Farmington	J	6
3	Thomaston	H	5
3	Taftville	R	6
3	West Hartford	K	4
3	East Windsor	M	3
3	Darien	D	11
3	Watertown	G	5
3	Mystic	S	8
3	Windsor Locks	L	2
3	Waterford	Q	8
3	Shelton	G	8
3	Plymouth	H	5
3	Danielson	T	4
3	Preston	S	6
3	North Grosvenor Dale	S	2
3	Canton	J	3
3	Wethersfield	L	5
3	Ridgefield	C	9
3	Bethel	D	8
3	Essex	O	8
2	Union City	H	6
2	East Haddam	N	7
2	Branford	K	9
2	Stafford Springs	P	2
2	Collinsville	I	3
2	Greenwich	B	11
2	Montville	Q	7
2	Brooklyn	S	4
2	Stonington	T	8
2	Jewett City	S	6
2	Plainville	J	5
2	North Haven	J	8
2	Woodstock	S	2
2	Simsbury	K	3
2	Cromwell	L	6
2	Haddam	M	7
2	South Windsor	L	3
2	Forestville	I	5
2	Terryville	I	5
2	Cheshire	J	7
2	Woodbury	F	6
2	Sharon	D	3
2	Moosup	T	4
2	Unionville	J	4
2	East Lyme	P	8
2	Pomfret	S	3
2	Ellington	N	3
2	Mansfield	P	3
2	Washington	E	5
2	Sandyhook	F	7
2	Kensington	K	5
2	Saybrook	O	9
2	Coventry	O	4
2	Norfolk	F	2
2	Wilton	D	10
2	Somers	N	2
2	Trumbull	F	9
2	Lebanon	P	5
2	Madison	M	9
2	Bloomfield	K	3

NEW YORK

Land area, 47,620 sq. m.
Water area, 1,550 sq. m.
Pop. 1900 7,268,894
Male 3,614,780
Female 3,654,114
Native 5,368,469
Foreign 1,900,425
White 7,156,881
African 90,232
Chinese 7,170
Japanese 354
Indian 5,257

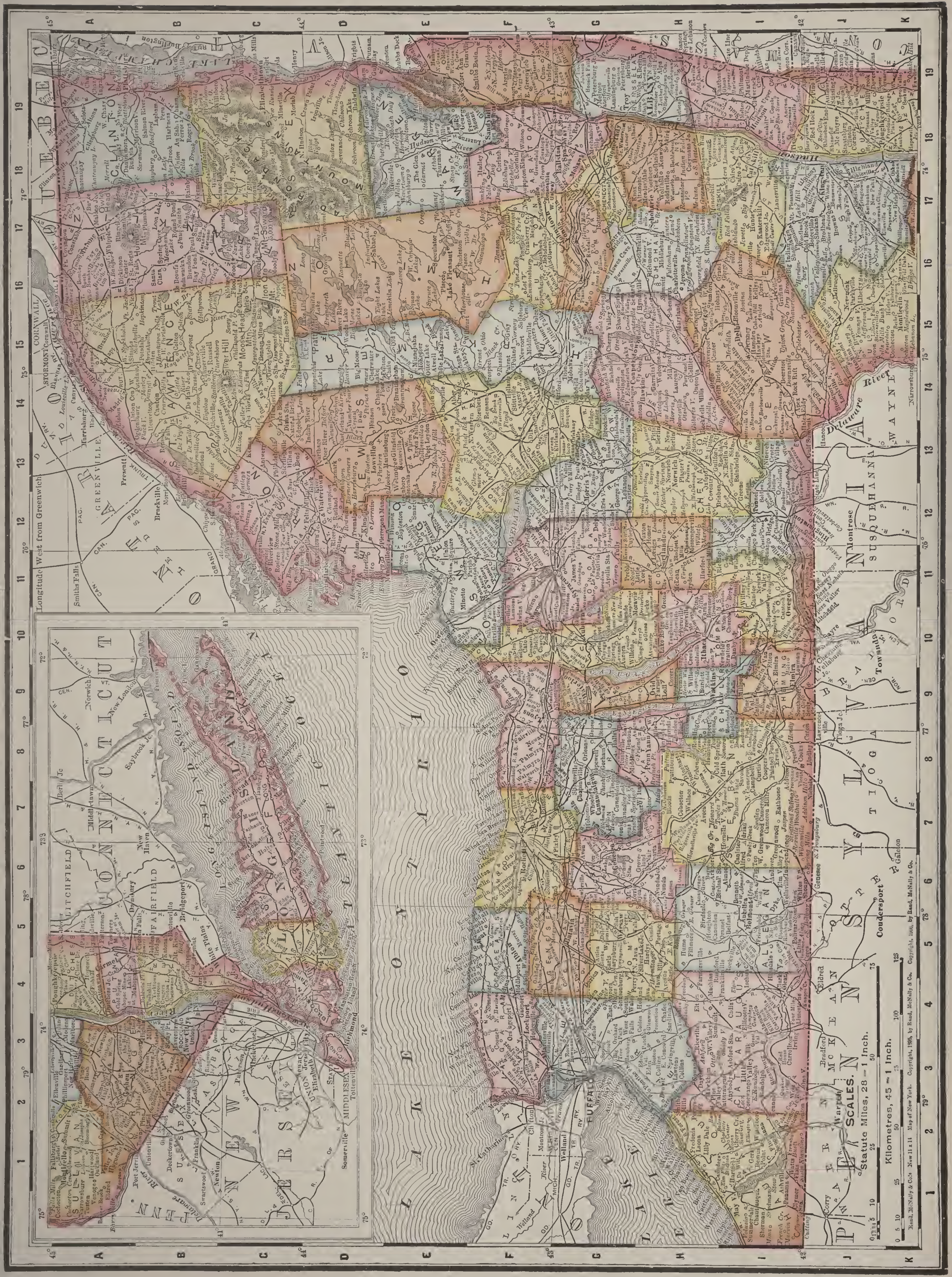
COUNTIES.

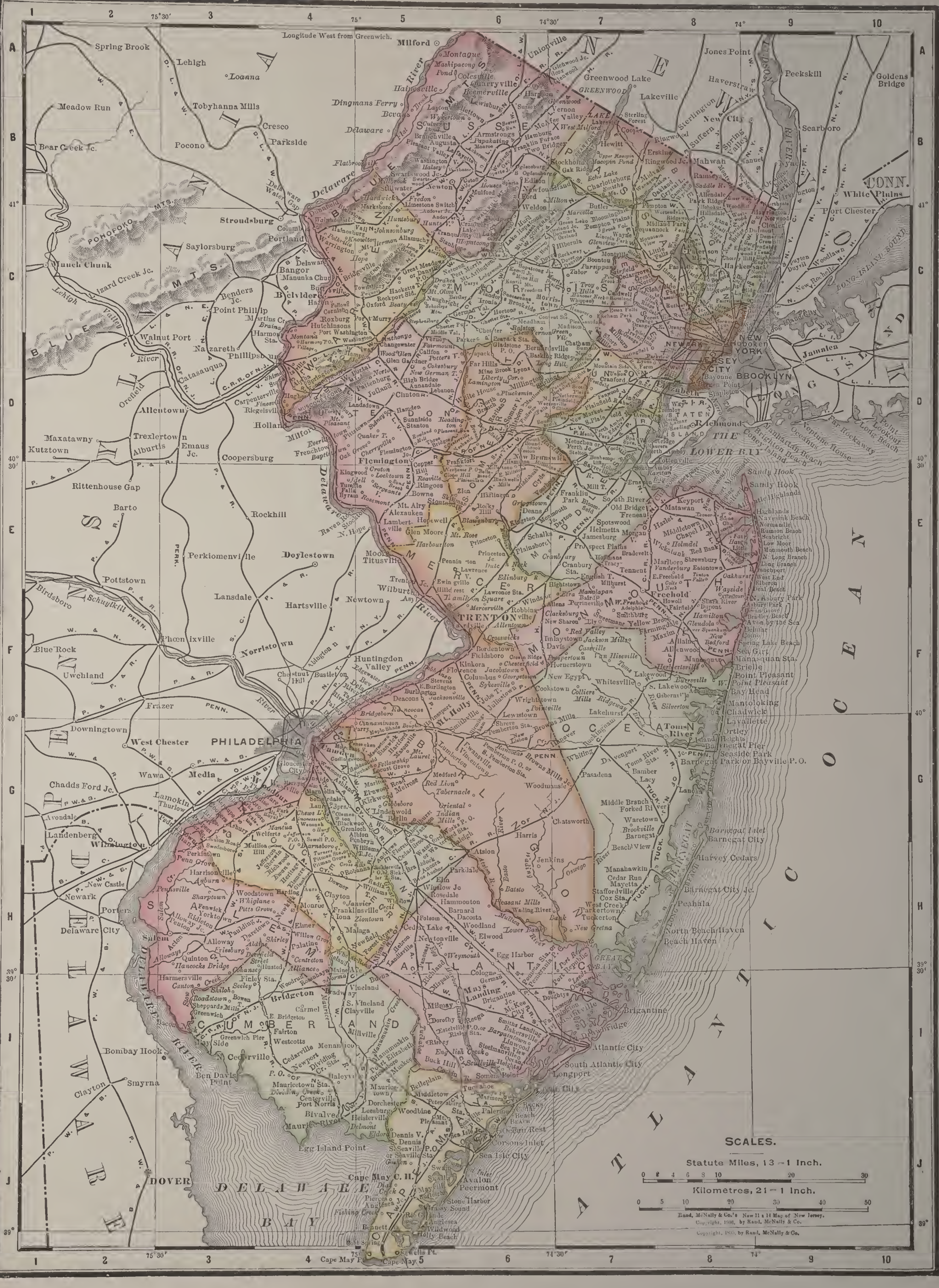
Albany	H	18
Allegany	I	5
Broome	I	12
Cattaraugus	I	3
Cayuga	G	10
Chautauqua	I	1
Chemung	I	9
Chenango	H	13
Clinton	A	19
Columbia	I	19
Cortland	H	11
Delaware	I	15
Dutchess	J	18
Erie	G	3
Essex	C	18
Franklin	B	17
Fulton	F	16
Genesee	F	5
Greene	I	17
Hamilton	E	16
Herkimer	F	15
Jefferson	C	12
Kings	D	3
Lewis	D	13
Livingston	G	6
Madison	G	13
Monroe	F	6
Montgomery	G	16
Nassau	C	5
New York	C	4
Niagara	F	3
Oneida	F	13
Onondaga	G	11
Ontario	G	8
Orange	A	2
Orleans	F	5
Oswego	E	11
Otsego	H	15
Putnam	A	4
Queens	D	4
Rensselaer	G	19
Richmond	D	3
Rockland	B	3
Saratoga	F	18
Schenectady	G	17
Schoharie	H	16
Schuyler	H	9
Seneca	G	9
Steuben	I	7
St. Lawrence	B	14
Suffolk	C	7
Sullivan	J	15
Tioga	I	10
Tompkins	H	10
Ulster	J	17
Warren	E	18
Washington	F	19
Wayne	F	8
Westchester	B	4
Wyoming	G	5
Yates	G	8

CHIEF CITIES.

Pop.—Thousands.

3137	New York	C	
1,850	Manhattan Borough.		
201	Bronx Borough.		
1167	Brooklyn Borough.		
67	Richmond Borough.		
153	Queens Borough.		
352	Buffalo	G	3
163	Rochester	F	6
108	Syracuse	G	11
94	Albany	H	19
61	Troy	G	19
56	Utica	F	14
48	Yonkers	C	4
40	Binghamton	I	12
36	Elmira	I	9
32	Schenectady	G	18
30	Auburn	G	10
25	Newburg	A	3
25	Kingston	J	17
24	Poughkeepsie	A	4
24	Cohoes	G	8
23	Jamestown	I	2
22	Oswego	E	10
22	Watertown	D	12
21	Amsterdam	G	17
21	Mount Vernon	C	4
19	Niagara Falls	F	2
18	Gloversville	F	16
17	Lockport	F	3
15	Rome	F	13
15	New Rochelle	C	4
15	Middletown	A	2
14	Watervliet (P.O. West Troy)	G	18
13	Ithaca	H	10
13	Ogdensburg	A	13
13	Glens Falls	F	19
13	Lansingburg	G	19
12	Saratoga Springs	F	18
12	Hornellsville	I	7
12	Dunkirk	H	1
11	Corning	I	8
10	Geneva	G	9
10	Peekskill	B	4
10	Little Falls	F	15
10	Johnstown	F	17
10	Hudson	I	18
9	Olean	I	4
9	Port Jervis	A	1
9	Batavia	G	5
9	North Tonawanda	F	3
9	Cortland	H	11





NEW JERSEY

Land area, 7,525 sq. m.
Water area, 290 sq. m.
Pop. 1900, 1,883,669
Male 941,760
Female 941,909
Native 1,451,785
Foreign 431,881
White 1,812,317
African 69,844
Chinese 1,393
Japanese 52
Indian 63

COUNTIES.

Atlantic H 6
Bergen C 8
Burlington G 6
Camden G 4
Cape May J 5
Cumberland I 4
Essex C 7
Gloucester H 4
Hudson D 8
Hunterdon D 5
Mercer E 6
Middlesex E 7
Monmouth F 7
Morris C 6
Ocean G 7
Passaic B 7
Salem H 3
Somerset D 6
Sussex B 6
Union D 7
Warren C 5

CHIEF CITIES.

Pop.—Thousands.

246 Newark D 8
206 Jersey City D 8
105 Paterson C 8
76 Camden G 4
73 Trenton F 6
59 Hoboken D 9
52 Elizabeth D 8
33 Bayonne D 8
28 Atlantic City I 7
28 Passaic C 8
24 Orange C 8
22 E. Orange C 8
20 New Brunswick D 7
18 Perth Amboy D 8
15 Plainfield D 7
15 Union D 7
14 Montclair C 8
14 Bridgeton I 4
11 Morristown C 7
11 Millville I 4
10 Phillipsburg D 4
10 Bloomfield C 8
9 Hackensack C 9
9 Long Branch E 9
9 Rahway D 7
7 Burlington F 5
7 Gloucester City G 4
6 S. Amboy E 8
6 Englewood C 9
6 Dover C 6
6 Salem H 3
5 Red Bank E 8
5 Summit D 7
5 Somerville D 6
5 Lambertville E 5
5 S. Orange D 7
4 Rutherford C 8
4 Newton B 5
4 Vineland I 5
4 Asbury Park F 9
4 Bordentown F 6
4 Woodbury G 4
4 Boonton C 7
4 Princeton E 6
4 Madison C 7
4 Washington D 5
4 Garfield C 8
3 Hammonton H 5
3 Keyport E 8
3 Raritan D 6
3 Freehold F 8
3 S. River E 7
3 Haddonfield G 5
3 Ridgewood C 8
3 Boundbrook D 6
3 Carlstadt C 8
2 Hackettstown C 5
2 Cape May J 5
2 Pleasantville I 7
2 Hawthorne C 8
2 Wharton C 6
2 Glenridge C 7
2 Clayton H 4
2 Beverly F 5
2 Lodi C 8
2 Penngrove H 3
2 Egg Harbor H 6
2 Metuchen D 7
2 Belvidere C 4
2 Hightstown E 7
2 Tenafly C 9
2 Roselle D 8
2 Collingswood G 4
2 Secaucus C 8
2 Merchantville G 4
2 Matawan E 8
1 Manasquan F 8
1 Rockaway C 7
1 Atlantic Highlands E 9
1 High Bridge D 5
1 Woodstown H 3
1 Caldwell C 7
1 Chatham D 7
1 Midland Park C 8
1 Riverton F 4
1 Ocean City I 6
1 Deckertown B 6
1 Hasbrouck Heights C 8
1 Little Ferry C 9
1 Dunellen D 7
1 Highlands E 9
1 Seabright E 9
1 Elmer H 4
1 Jamesburg E 7
1 Frenchtown D 4
1 Fairview C 8
1 Junction D 5
1 Bradley Beach F 9
1 Hopewell E 5
1 Cliffside C 9

PENNSYLVANIA

Land area, 44,985 sq. m.
Water area, 230 sq. m.
Pop. 1900, 6,302,115
Male... 3,204,541
Female 3,097,574
Native 5,316,865
Foreign. 985,250
White. 6,141,664
African 156,845
Chinese... 1,927
Japanese 40
Indian 1,639

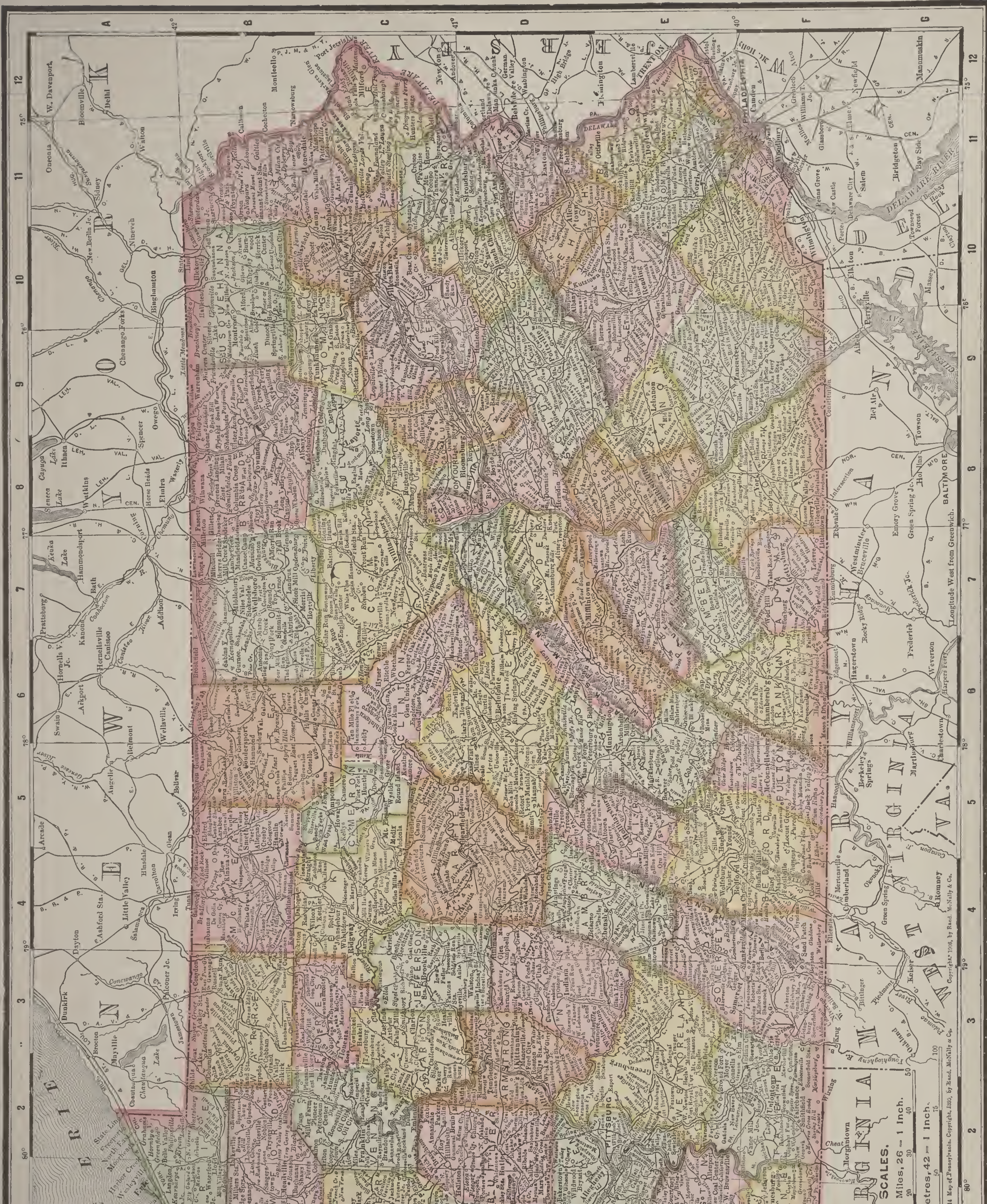
COUNTIES.

Adams	F	7
Allegheny	D	1
Armstrong	D	2
Beaver	D	1
Bedford	F	4
Berks	E	9
Blair	E	5
Bradford	B	8
Bucks	E	11
Butler	D	2
Cambria	D	4
Cameron	C	5
Carbon	D	10
Center	D	6
Chester	F	10
Clarion	C	3
Clearfield	C	4
Clinton	C	6
Columbia	C	8
Crawford	B	1
Cumberland	E	7
Dauphin	E	8
Delaware	F	11
Elk	C	4
Erie	B	1
Fayette	F	2
Forest	B	3
Franklin	F	6
Fulton	F	5
Greene	F	1
Huntingdon	E	5
Indiana	D	3
Jefferson	C	3
Juniata	E	6
Lackawanna	C	10
Lancaster	E	9
Lawrence	D	1
Lebanon	E	8
Lehigh	D	10
Luzerne	C	9
Lycoming	C	7
McKean	B	4
Mercer	C	1
Mifflin	D	6
Monroe	C	11
Montgomery	E	11
Montour	C	8
Northampton	D	11
Northumberland	D	8
Perry	E	7
Philadelphia	F	11
Pike	C	11
Potter	B	5
Schuylkill	D	9
Snyder	D	7
Somerset	F	3
Sullivan	C	8
Susquehanna	B	10
Tioga	B	7
Union	D	7
Venango	C	2
Warren	B	3
Washington	E	1
Wayne	B	11
Westmoreland	E	2
Wyoming	B	9
York	F	8

CHIEF CITIES.

Pop.—Thousands.

1294	Philadelphia	F	11
322	Pittsburg	E	2
130	Allegheny	D	1
102	Scranton	C	10
79	Reading	E	10
53	Erie	A	1
52	Wilkesbarre	C	10
50	Harrisburg	E	8
41	Lancaster	E	9
39	Altoona	E	5
36	Johnstown	E	4
35	Allentown	D	10
34	McKeesport	E	2
34	Chester	F	11
31	York	F	8
29	Williamsport	C	7
28	Newcastle	C	1
25	Easton	D	11
22	Norristown	E	11
20	Shenandoah	D	9
18	Shamokin	D	8
18	Lebanon	E	9
16	Pottsville	D	9
16	Braddock	E	2
15	Bradford	B	4
14	Hazleton	D	9
14	Pottstown	E	10
14	Plymouth	C	10
	Carbondale	B	11
14	Mahanoy City	D	9
13	Oil City	C	2
13	South Bethlehem	D	11
13	Mount Carmel	D	8
13	Dunmore	C	10
13	Pittston	C	10
13	Homestead	E	2
12	Columbia	E	8
12	Nanticoke	C	9
12	Steelton	E	8
12	Wilkinsburg	E	2
11	Butler	D	2
10	Meadville	B	1
10	Beaver Falls	D	1
10	Sunbury	D	8
10	Carlisle	E	7
10	W. Chester	F	10
9	Dubois	C	4
9	Phœnixville	E	10
9	Duquesne	E	2
9	Sharon	C	1
9	Chambersburg	F	6
9	Titusville	B	2
8	Warren	B	3
8	Danville	C	8
8	Washington	E	1
7	Uniontown	F	2
7	Carnegie	E	1
7	Franklin	C	2
7	Bethlehem	D	11



MARYLAND

Land area, 9,860 sq. m.
Water area, 2,350 sq. m.
Pop. 1900, 1,188,044
Male 589,275
Female 598,769
Native 1,094,110
Foreign 93,934
White 952,424
African 235,064
Chinese 544
Japanese 9
Indian 3

COUNTIES.

Allegany	D 4
Anne Arundel	D 8
Baltimore	C 8
Baltimore City	C 8
Calvert	F 8
Caroline	E 11
Carroll	B 6
Cecil	B 10
Charles	G 7
Dorchester	G 10
Frederick	C 5
Garret	G 2
Harford	B 9
Howard	C 7
Kent	D 10
Montgomery	D 5
Prince George	E 7
Queen Anne	D 11
St. Mary	G 8
Somerset	H 11
Talbot	E 10
Washington	B 3
Wicomico	G 12
Worcester	H 13

CHIEF CITIES.

Pop.—Thousands.

509	Baltimore	C 8
17	Cumberland	G 4
14	Hagerstown	B 3
9	Frederick	C 5
8	Annapolis	E 8
6	Cambridge	F 10
5	Frostburg	G 3
4	Salisbury	G 12
3	Havre de Grace	B 10
3	Westminster	B 6
3	Crisfield	I 11
3	Easton	E 10
3	Chestertown	D 10
3	Elkton	B 11
2	Brunswick	C 4
2	Lonaconing	G 3
2	Pocomoke City	H 12
2	Laurel	D 7
2	Mount Savage	G 3
2	Westernport	H 3
2	Midland	G 3
2	Snow Hill	H 13
2	Port Deposit	B 10
2	Cockeysville	C 8
2	Deals Island	H 10
2	Ocean	G 3
1	Barton	H 3
1	Williamsport	B 3
1	Ellicott City	C 7
1	Berlin	G 13
1	Oxford	F 9
1	Centerville	D 10
1	Hyattsville	E 6
1	Chesapeake City	B 11
1	Oakland	H 1
1	Rockville	D 6
1	St. Michaels	E 9
1	Sharpsburg	C 3
1	Northeast	B 11
1	Belair	B 9

DELAWARE

Land area, 1,960 sq. m.
Water area, 90 sq. m.
Pop. 1900 184,735
Male 94,158
Female 90,577
Native 170,925
Foreign 13,810
White 153,977
African 30,697
Chinese 51
Japanese 1
Indian 9

COUNTIES.

Kent	D 12
New Castle	B 12
Sussex	F 12

CHIEF CITIES.

Pop.—Thousands.

76	Wilmington	B 12
3	New Castle	B 12
3	Dover	D 12
2	Milford	E 13
2	Lewes	E 14
2	Smyrna	C 12
2	Laurel	F 12
2	Seaford	F 12
2	Georgetown	F 12
2	Middletown	C 12
1	Harrington	E 12
1	Newark	B 11
1	Delaware City	B 12

DIST. OF COL.

Land area, 60 sq. m.
Water area, 10 sq. m.
Pop. 1900 278,718
Male 132,004
Female 146,714
Native 258,599
Foreign 20,119
White 191,532
African 86,702
Chinese 455
Japanese 7
Indian 22

CHIEF CITIES.

Pop.—Thousands.

218	Washington	E 6
15	Georgetown	E 6
2	Anacostia	E 7
2	Goodhope	E 6
1	Takoma Park	E 6
1	Tennallytown	E 6
	Stas. Washington P. O.	

Pop.—Hundreds.

7	Brookland	E 6
5	Benning	E 6
3	Deanwood	E 7

VIRGINIA

Land area, 40,125 sq. m.
Water area, 2,325 sq. m.
Pop. 1900 1,854,184
Male 925,897
Female 928,287
Native 1,834,723
Foreign 19,461
White 1,192,855
African 660,722
Chinese 243
Japanese 10
Indian 351

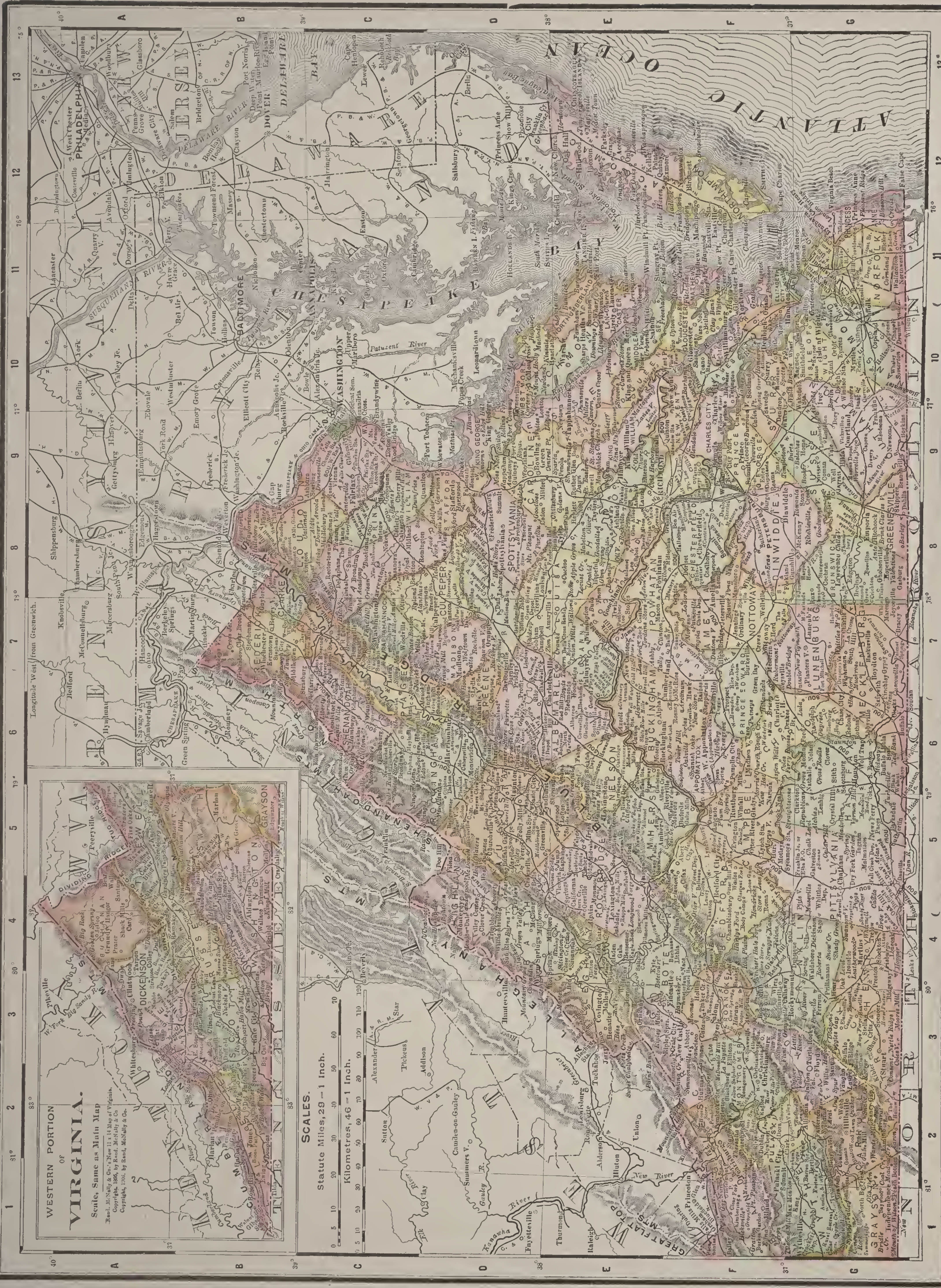
COUNTIES.

Accomac	E	12
Albemarle	D	6
Alexandria	C	9
Alleghany	E	3
Amelia	F	7
Amherst	E	5
Appomattox	F	6
Augusta	D	5
Bath	D	4
Bedford	F	4
Bland	F	1
Botetourt	E	4
Brunswick	G	8
Buchanan	A	4
Buckingham	E	6
Campbell	F	5
Caroline	D	9
Carroll	G	2
Charles City	F	9
Charlotte	F	6
Chesterfield	F	8
Clarke	B	8
Craig	F	3
Culpeper	D	8
Cumberland	E	7
Dickenson	A	3
Dinwiddie	F	8
Elizabeth City	F	11
Essex	E	10
Fairfax	C	9
Fauquier	C	8
Floyd	G	3
Fluvanna	E	7
Franklin	F	4
Frederick	B	7
Giles	F	2
Gloucester	F	10
Goochland	E	8
Grayson	G	1
Greene	D	6
Greenesville	G	8
Halifax	G	5
Hanover	E	8
Henrico	E	9
Henry	G	4
Highland	D	4
Isle of Wight	G	10
James City	F	10
King and Queen	E	9
King George	D	9
King William	E	9
Lancaster	E	10
Lee	B	2
Loudoun	B	8
Louisa	D	7
Lunenburg	G	7
Madison	D	7
Mathews	F	11
Mecklenburg	G	7
Middlesex	E	10
Montgomery	F	3
Nansemond	G	10
Nelson	E	6
New Kent	F	9
Norfolk	G	11
Northampton	F	12
Northumberland	E	11
Nottoway	F	7
Orange	D	7
Page	C	6
Patrick	G	3
Pittsylvania	G	5
Powhatan	E	7
Prince Edward	F	6
Prince George	F	9
Princess Anne	G	11
Prince William	C	8
Pulaski	F	2
Rappahannock	C	7
Richmond	E	10
Roanoke	F	3
Rockbridge	E	4
Rockingham	D	6
Russell	B	4
Scott	B	3
Shenandoah	C	6
Smyth	B	5
Southampton	G	9
Spottsylvania	D	8
Stafford	D	8
Surry	F	10
Sussex	G	8
Tazewell	A	5
Warren	C	7
Warwick	F	10
Washington	B	4
Westmoreland	D	10
Wise	B	3
Wythe	G	1
York	F	10

CHIEF CITIES.

Pop.—Thousands.

85	Richmond	F	9
47	Norfolk	G	11
22	Petersburg	F	8
21	Roanoke	F	3
20	Newport News	G	11
19	Lynchburg	F	5
17	Portsmouth	G	11
17	Danville	D	4
15	Alexandria	C	10
10	Manchester	F	8
7	Staunton	D	5
6	Charlottesville	D	7
5	Winchester	B	7
5	Fredericksburg	D	9
5	Berkley	G	10
5	Bristol	B	4
4	Suffolk	G	11
4	Harrisonburg	D	6
3	Hampton	F	11
3	Salem	F	3
3	Radford	F	2
3	Clifton Forge	E	4
3	Lexington	E	4



WEST VIRGINIA

Land area,	21,645 sq. m.
Water area,	135 sq. m.
Pop. 1900	958,800
Male	499,242
Female	459,558
Native	936,348
Foreign	22,451
White	915,233
African	43,499
Chinese	56
Indian	12

COUNTIES.

Barbour	B 6
Berkeley	B 10
Boone	D 3
Braxton	C 5
Brooke	E 11
Cabell	D 2
Calhoun	C 4
Clay	D 4
Doddridge	B 5
Fayette	D 4
Gilmer	C 5
Grant	B 8
Greenbrier	D 5
Hampshire	B 9
Hancock	D 11
Hardy	C 9
Harrison	B 6
Jackson	C 3
Jefferson	B 11
Kanawha	D 3
Lewis	C 5
Lincoln	D 2
Logan	E 2
McDowell	F 3
Marion	A 6
Marshall	F 10
Mason	C 2
Mercer	E 4
Mineral	B 9
Mingo	E 2
Monongalia	A 6
Monroe	E 5
Morgan	A 10
Nicholas	D 5
Ohio	E 11
Pendleton	C 8
Pleasants	B 4
Pocahontas	D 6
Preston	B 7
Putnam	C 3
Raleigh	E 4
Randolph	C 6
Ritchie	B 4
Roane	C 4
Summers	E 5
Taylor	B 6
Tucker	B 7
Tyler	B 5
Upsher	C 6
Wayne	D 2
Webster	D 5
Wetzel	A 5
Wirt	B 4
Wood	B 3
Wyoming	E 3

CHIEF CITIES.

Pop. Thousands.

39	Wheeling	E 10
12	Huntingdon	D 1
12	Parkersburg	B 3
11	Charleston	D 3
8	Martinsburg	B 11
6	Fairmont	B 6
6	Grafton	B 7
5	Moundsville	E 10
5	Bluefield	F 4
5	Benwood	E 10
4	Clarksburg	B 6
4	Hinton	E 4
3	Sistersville	B 4
3	Wellsburg	E 10
3	Weston	B 5
3	Keyser	B 9
2	Charlestown	B 11
2	Davis	B 8
2	New Cumberland	D 10
2	Thomas	B 7
2	Piedmont	B 8
2	Elkins	C 7
2	Point Pleasant	C 2
2	Morgantown	A 7
2	Monongah	B 6
2	Mannington	B 6
2	Montgomery	D 4
2	Buckhannon	C 6
1	McMechen	E 10
1	Guyandotte	D 2
1	Ceredo	D 1
1	Shepherdstown	B 11
1	Ansted	D 4
1	New Martinsville	A 4
1	Keystone	F 3
1	Ravenswood	C 3
1	Ronceverte	E 5
1	Cameron	F 11

Pop.—Hundreds

9	Mason	B 2
9	Harpers Ferry	B 11
9	Lewisburg	E 5
9	Sutton	C 5
9	Kenova	D 1
8	Bramwell	F 4
8	St. Marys	B 4
8	St. Albans	D 3
8	Fetterman	B 6
8	Berkeley Springs	A 10
8	Elm Grove	E 11
8	Newburg	B 7
7	Salem	B 5
7	Pennsboro	B 4
7	Spencer	C 4
7	Kingwood	B 7
7	Paw Paw	B 10
7	Philippi	B 7
7	Elizabeth	B 4
7	Cairo	B 4
7	Rowlesburg	B 5
6	W. Union	B 7
6	Parsons	B 7
6	Terra Alta	B 2
6	Milton	D 7
6	Elk Garden	B 8
6	Romney	B 9
6	Ripley	C 3
5	Bayard	B 8

N. CAROLINA

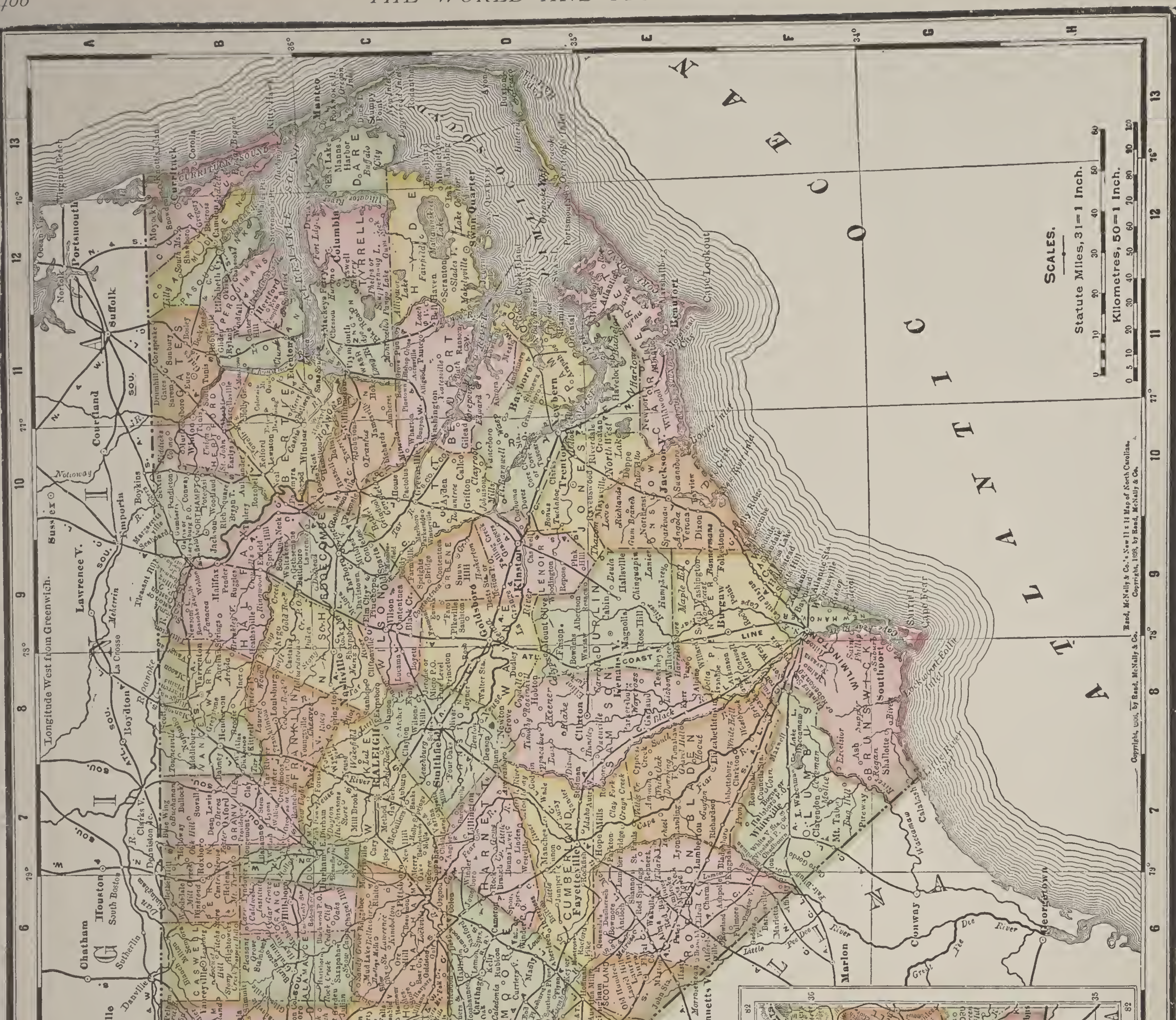
Land area, 48,580 sq. m.
Water area, 3,670 sq. m.
Pop. 1900 . 1,893,810
Male 938,677
Female . 955,133
Native 1,889,318
Foreign . 4,492
White . 1,263,603
African . 624,469
Chinese 51
Indian 5,687

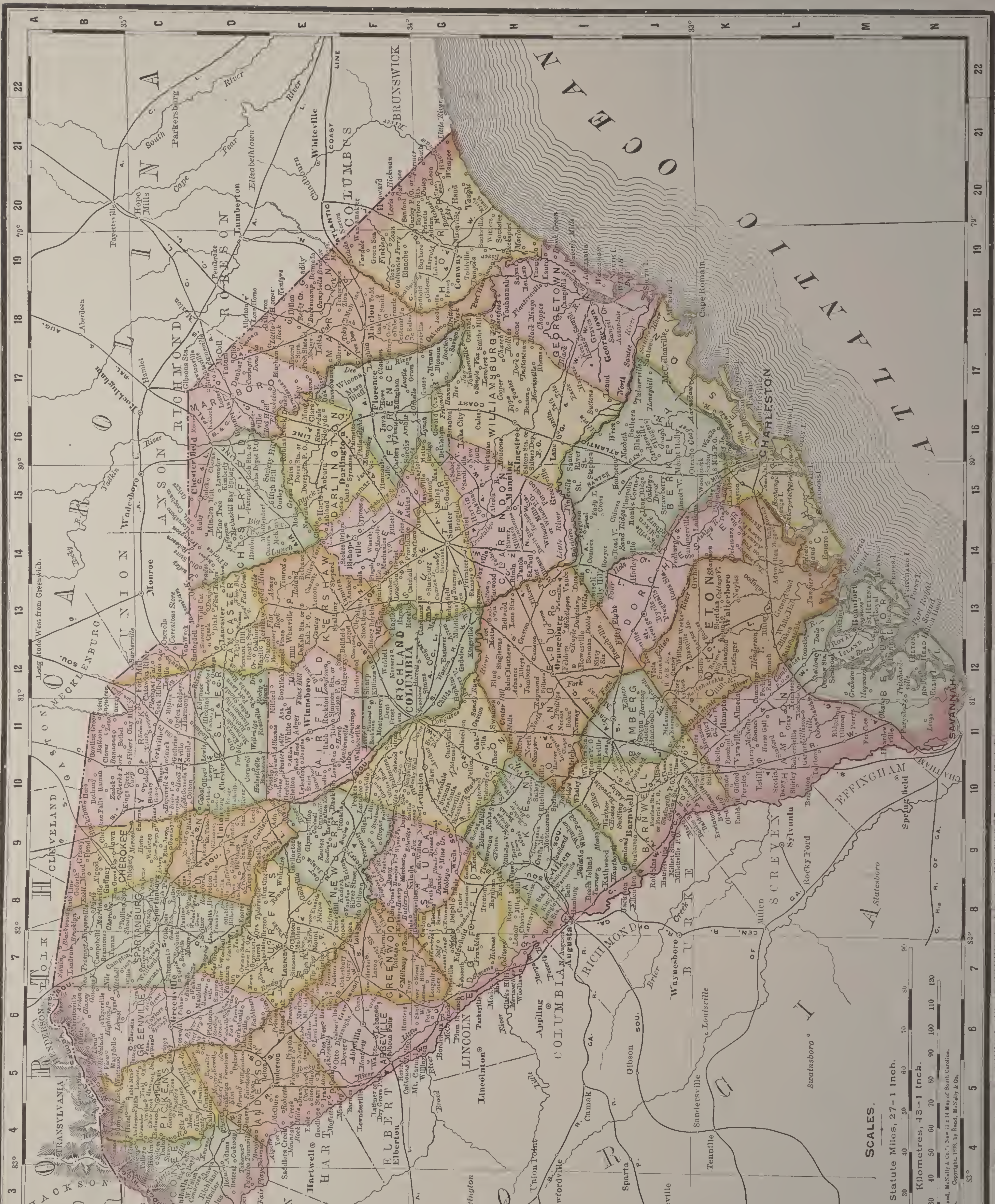
COUNTIES.

Alamance .. B 6
Alexander .. C 2
Alleghany . B 2
Anson ...... E 4
Ashe .... B 1
Beaufort ... D 11
Bertie ...... B 10
Bladen ...... E 7
Brunswick . F 8
Buncombe . G 4
Burke .... C 1
Cabarrus ... D 3
Caldwell .... C 1
Camden .... B 12
Carteret .... E 11
Caswell .... B 6
Catawba .... C 2
Chatham ... C 6
Cherokee ... H 1
Chowan .... B 11
Clay .... H 2
Cleveland .. D 1
Columbus .. F 7
Craven ...... D 10
Cumberland D 6
Currituck . B 12
Dare .... C 13
Davidson .. C 4
Davie .... C 3
Duplin ...... E 9
Durham .... B 7
Edgecombe C 9
Forsyth ..... B 4
Franklin .... B 8
Gaston ...... D 2
Gates .... B 11
Graham ... G 2
Granville ... B 7
Greene ...... D 9
Guilford .... B 5
Halifax ..... B 9
Harnett .... D 7
Haywood .. G 3
Henderson G 4
Hertford .. B 10
Hyde .... C 12
Iredell ...... C 3
Jackson .. G 3
Johnston . C 8
Jones .... D 10
Lenoir .... D 9
Lincoln ..... D 2
McDowell . G 5
Macon .... H 3
Madison . F 4
Martin ...... C 10
Mecklenburg D 3
Mitchell . F 5
Montgomery D 5
Moore .. D 6
Nash .... C 8
New Hanover ... F 9
Northampton .... B 10
Onslow ..... E 10
Orange ..... B 6
Pamlico .... D 11
Pasquotank B 12
Pender . E 9
Perquimans B 12
Person ..... B 6
Pitt .... C 10
Polk .... H 5
Randolph C 5
Richmond .. E 5
Robeson .. E 6
Rockingham B 5
Rowan ..... C 3
Rutherford D 1
Sampson .. E 8
Scotland . E 6
Stanly ..... D 4
Stokes ..... B 4
Surry ...... B 3
Swain ...... G 2
Transylvania .... H 4
Tyrrell .... C 12
Union .... E 3
Vance ..... B 8
Wake ...... C 7
Warren . B 8
Washington C 11
Watauga .. B 1
Wayne ... D 8
Wilkes ...... B 2
Wilson .... C 9
Yadkin .... B 3
Yancey ..... F 5

CHIEF CITIES.

Pop.—Thousands.
21 Wilmington F 8
18 Charlotte D 3
15 Asheville G 4
14 Raleigh .. C 7
14 Winston-Salem ... B 4
10 Greensboro B 5
9 Newbern . D 10
8 Concord . D 3
7 Durham . C 7
6 Elizabeth City B 12
6 Salisbury . C 3
6 Goldsboro D 9
5 Washington C 11
5 Fayetteville D 7
5 Gastonia ... D 2





S. CAROLINA

Land area, 30,170 sq. m.
Water area, 400 sq. m.
Pop. 1900, 1,340,316
Male 664,895
Female . 675,421
Native 1,334,788
Foreign . 5,528
White . 557,807
African . 782,321
Chinese 67
Indian 121

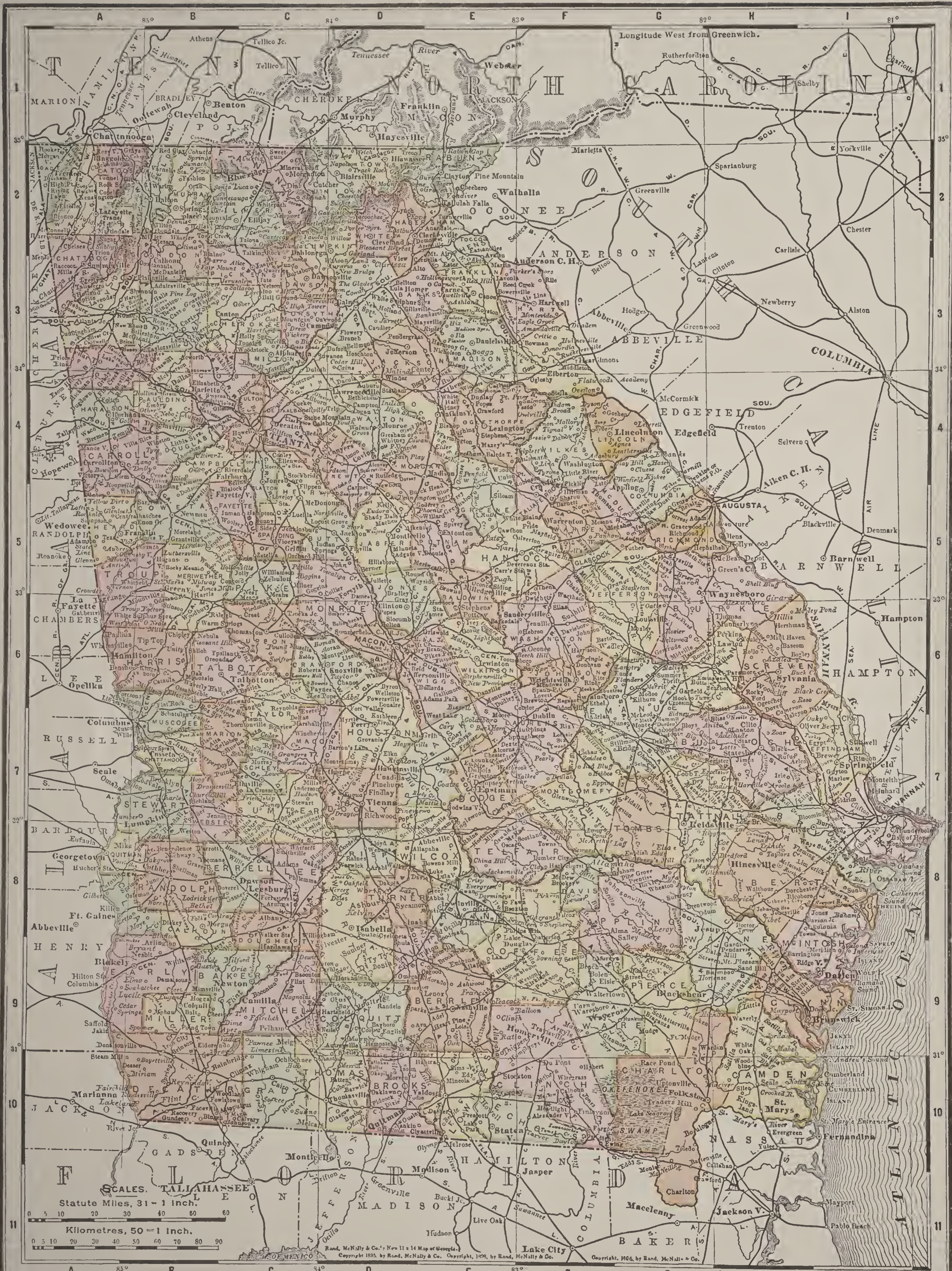
COUNTIES.

Abbeville	F 6
Aiken	H 9
Anderson	D 5
Bamberg	J 11
Barnwell	J 10
Beaufort	M 12
Berkeley	J 16
Charleston	K 17
Cherokee	B 9
Chester	D 11
Chesterfield	D 15
Clarendon	H 14
Colleton	K 13
Darlington	E 15
Dorchester	J 14
Edgefield	G 8
Fairfield	E 11
Florence	F 16
Georgetown	H 18
Greenville	C 6
Greenwood	F 7
Hampton	L 11
Horry	G 19
Kershaw	E 13
Lancaster	D 13
Laurens	E 7
Lee	F 15
Lexington	G 10
Marion	E 18
Marlboro	D 17
Newberry	E 9
Oconee	C 3
Orangeburg	H 12
Pickens	C 4
Richland	F 12
Saluda	G 8
Spartanburg	C 8
Sumter	G 14
Union	D 9
Williamsburg	H 17
York	C 10

CHIEF CITIES.

Pop.—Thousands.

56	Charleston	L 16
21	Columbia	G 12
12	Greenville	C 6
11	Spartanburg	C 8
6	Sumter	G 14
5	Anderson	E 5
5	Rockhill	C 11
5	Union	D 9
5	Greenwood	F 7
5	Florence	F 17
5	Newberry	F 9
4	Orangeburg	I 12
4	Georgetown	I 18
4	Beaufort	M 13
4	Chester	D 10
4	Laurens	E 7
4	Gaffney	B 9
4	Abbeville	F 6
3	Piedmont	D 6
3	Aiken	I 9
3	Darlington	E 16
2	Camden	F 13
2	Summerville	J 14
2	Mount Pleasant	K 16
2	Yorkville	C 11
2	Bennettsville	D 16
2	Clinton	E 8
2	Marion	F 18
2	Edgefield	G 7
2	Winnsboro	E 11
2	Bamberg	I 11
1	Walterboro	K 13
1	Lancaster	D 13
1	Manning	H 15
1	Fort Mill	C 12
1	Barnwell	J 10
1	McColl	C 17
1	Walhalla	C 3
1	Blacksburg	B 10
1	Pelzer	D 5
1	Cheraw	D 16
1	Blackville	I 10
1	Branchville	I 12
1	Allendale	K 10
1	Dillon	E 18
1	Williamston	D 5
1	Batesburg	G 10
1	Clover	B 11



GEORGIA

Land area, 58,980 sq. m.
Water area, 495 sq. m.
Pop. 1900, 2,216,331
Male . 1,103,201
Female 1,113,130
Native 2,203,928
Foreign . 12,403
White . 1,181,294
African 1,034,813
Chinese 204
Japanese 1
Indian 19

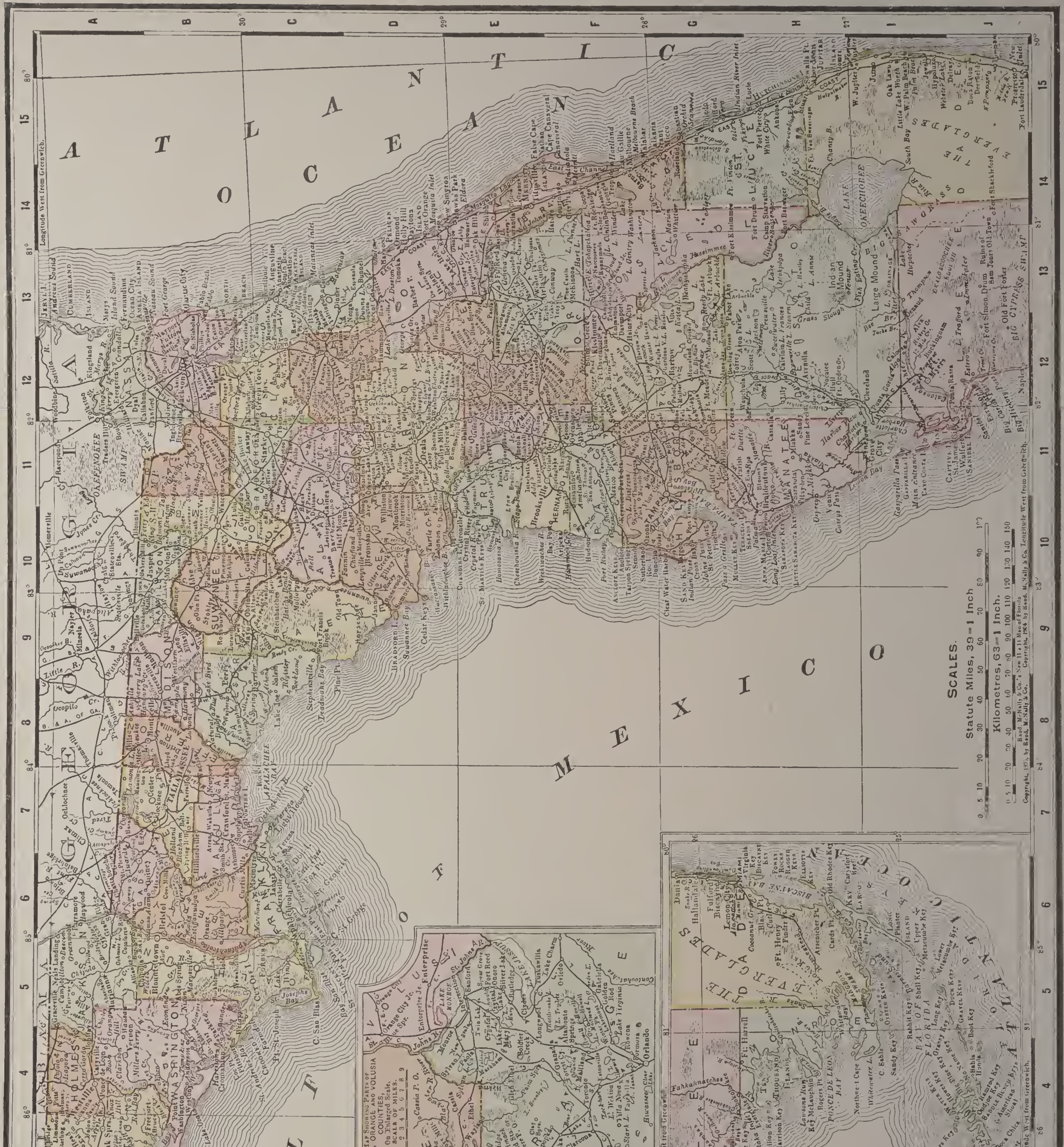
COUNTIES.

Appling	G	8
Baker	B	9
Baldwin	E	6
Banks	D	3
Bartow	B	3
Berrien	E	9
Bibb	D	6
Brooks	D	10
Bryan	I	8
Bulloch	H	7
Burke	G	6
Butts	C	5
Calhoun	B	8
Camden	H	10
Campbell	B	4
Carroll	A	4
Catoosa	A	2
Charlton	G	10
Chatham	I	8
Chattahoochee	B	7
Chattoga	A	3
Cherokee	C	3
Clarke	E	4
Clay	B	8
Clayton	C	5
Clinch	F	10
Cobb	B	4
Coffee	E	9
Colquitt	D	9
Columbia	G	5
Coweta	B	5
Crawford	C	6
Crisp	D	8
Dade	A	2
Dawson	C	3
Decatur	B	10
Dekalb	C	4
Dodge	E	7
Dooley	D	7
Dougherty	C	9
Douglas	B	4
Early	B	9
Echols	F	10
Effingham	I	7
Elbert	F	3
Emanuel	G	6
Fannin	C	2
Fayette	C	5
Floyd	A	3
Forsyth	C	3
Franklin	E	3
Fulton	C	4
Gilmer	C	2
Glascock	F	5
Glynn	H	9
Gordon	B	2
Grady	C	10
Greene	E	5
Gwinnett	C	4
Habersham	D	2
Hall	D	3
Hancock	E	5
Haralson	A	4
Harris	B	6
Hart	F	3
Heard	A	5
Henry	C	5
Houston	D	7
Irwin	E	8
Jackson	D	3
Jasper	D	5
Jeff Davis	F	8
Jefferson	G	5
Jennings	H	6
Johnson	F	6
Jones	D	5
Laurens	F	7
Lee	C	8
Liberty	H	8
Lincoln	G	4
Lowndes	E	10
Lumpkin	C	2
McDuffie	G	5
McIntosh	H	9
Macon	C	7
Madison	E	3
Marion	B	7
Meriwether	B	5
Miller	B	9
Milton	C	3
Mitchell	C	9
Monroe	D	6
Montgomery	F	7
Morgan	D	4
Murry	B	2
Muscogee	B	7
Newton	D	4
Oconee	E	4
Oglethorpe	E	4
Paulding	B	4
Pickens	B	3
Pierce	G	9
Pike	C	5
Polk	A	3
Pulaski	E	7
Putnam	E	5
Quitman	A	8
Rabun	E	2
Randolph	B	8
Richmond	G	5
Rockdale	C	4
Schley	C	7
Screven	H	6
Spalding	C	5
Stephens	E	2
Stewart	B	7
Sumter	C	7
Talbot	B	6
Taliaferro	F	5
Tattnall	G	7
Taylor	C	7
Telfair	E	8
Terrell	C	8
Thomas	D	10
Tift	D	9
Toombs	G	8
Towns	D	2
Troup	A	5
Turner	D	8
Twiggs	E	6
Union	D	2
Upson	C	6
Walker	A	2
Walton	D	4
Ware	F	9
Warren	F	5
Washington	F	6
Wayne	H	8
Webster	B	8
White	D	2
Whitfield	B	2
Wilcox	E	8
Wilkes	F	4
Wilkinson	E	6
Worth	D	8

CHIEF CITIES.

Pop.—Thousands.

90	Atlanta	C	4
54	Savannah	I	7
39	Augusta	H	5
23	Macon	D	6
18	Columbus	A	7
10	Athens	E	4
9	Brunswick	I	9
8	Americus	C	7
7	Rome	A	3
7	Griffin	C	5
6	Waycross	G	9
7	Valdosta	E	10



FLORIDA

Land area, 51,240 sq. m.
Water area, 4,440 sq. m.
Pop. 1900 . 528,542
Male . . . 275,246
Female . 253,296
Native . 504,710
Foreign . 23,832
White . 297,333
African 230,730
Chinese . 120
Japanese . . . 1
Indian . . . 358

COUNTIES.

Alachua	C 11
Baker	B 11
Bradford	C 11
Brevard	F 14
Calhoun	B 5
Citrus	E 11
Clay	C 12
Columbia	B 10
Dade	J 14
De Soto	H 12
Duval	B 12
Escambia	A 1
Franklin	C 7
Gadsden	A 6
Hamilton	B 9
Hernando	F 11
Hillsboro	G 11
Holmes	A 4
Jackson	A 5
Jefferson	B 8
Lafayette	C 9
Lake	E 12
Lee	J 13
Leon	B 7
Levy	D 10
Liberty	B 6
Madison	B 9
Manatee	H 11
Marion	D 11
Monroe	H 4
Nassau	A 12
Orange	F 13
Osceola	G 13
Pasco	F 11
Polk	F 12
Putnam	C 12
Santa Rosa	A 2
St. John	C 13
St. Lucie	H 14
Sumter	E 11
Suwanee	B 9
Taylor	B 8
Volusia	D 13
Wakulla	B 7
Walton	A 3
Washington	B 4

CHIEF CITIES.

Pop.—Thousands.

28	Jacksonville	B 12
18	Pensacola	B 1
17	Key West	J 3
16	Tampa	G 10
4	St. Augustine	C 13
4	Lake City	B 10
4	Gainesville	C 11
3	Ocala	D 11
3	Palatka	C 12
3	Fernandina	A 13
3	Apalachicola	C 6
3	Tallahassee	B 7
2	Orlando	E 13
2	Bartow	G 12
2	Daytona	D 14
2	Miami	G 6
2	Live Oak	B 10
2	St. Petersburg	G 10
2	High Springs	C 10
1	Sanford	E 13
1	De Land	D 13
1	Port Tampa City	G 10
1	Bagdad	B 3
1	Warrington	B 1
1	De Funiak Springs	A 3
1	Milton	A 2
1	Lakeland	F 12
1	Kissimmee	F 12
1	Monticello	B 8
1	Jasper	A 10
1	Starke	C 11

ALABAMA

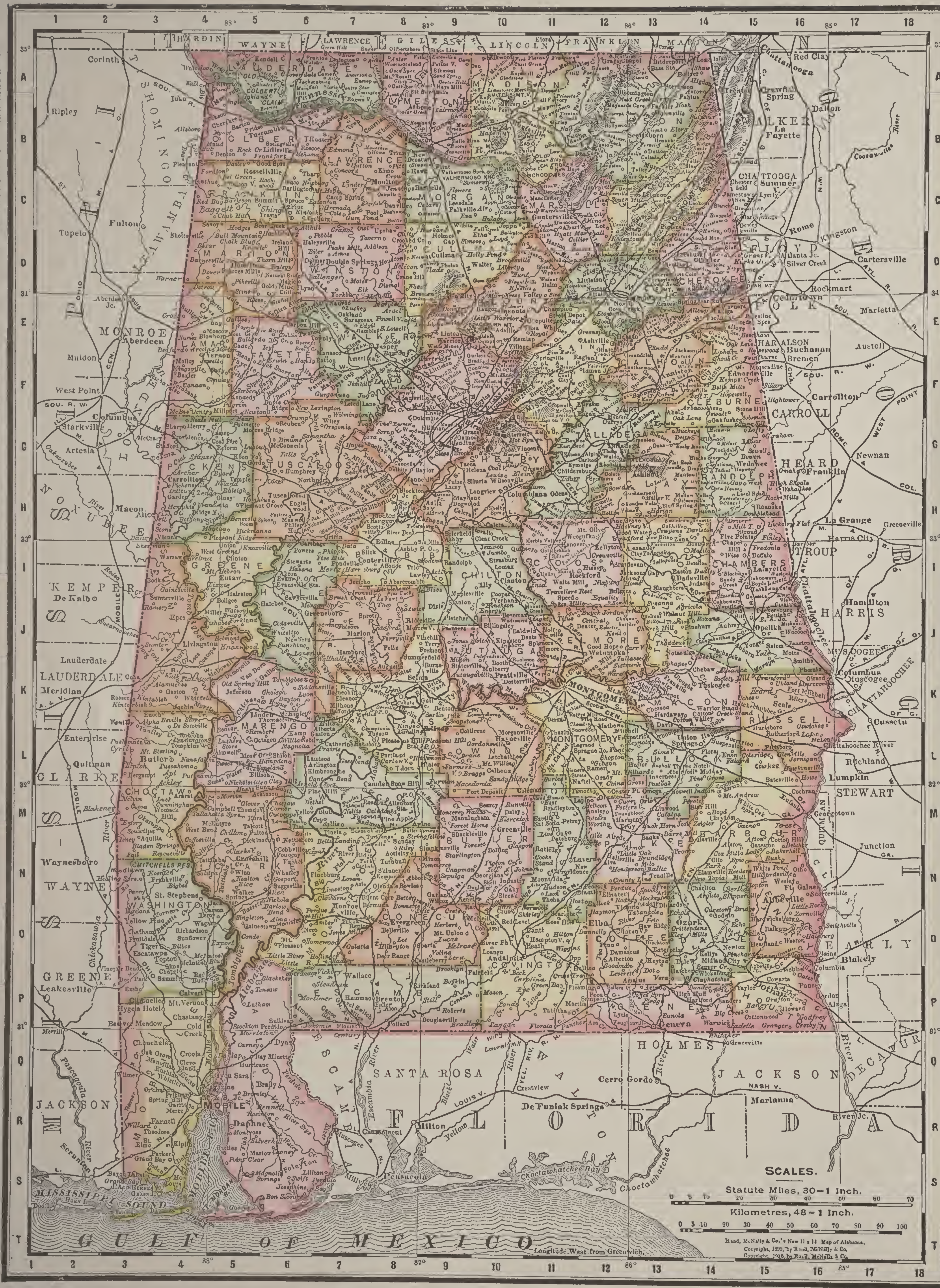
Land area, 51,540 sq. m.
Water area, 710 sq. m.
Pop. 1900, 1,828,697
Male . 916,764
Female 911,933
Native 1,814,105
Foreign 11,592
White 1,001,152
African 827,307
Chinese . 58
Japanese 3
Indian... ..177

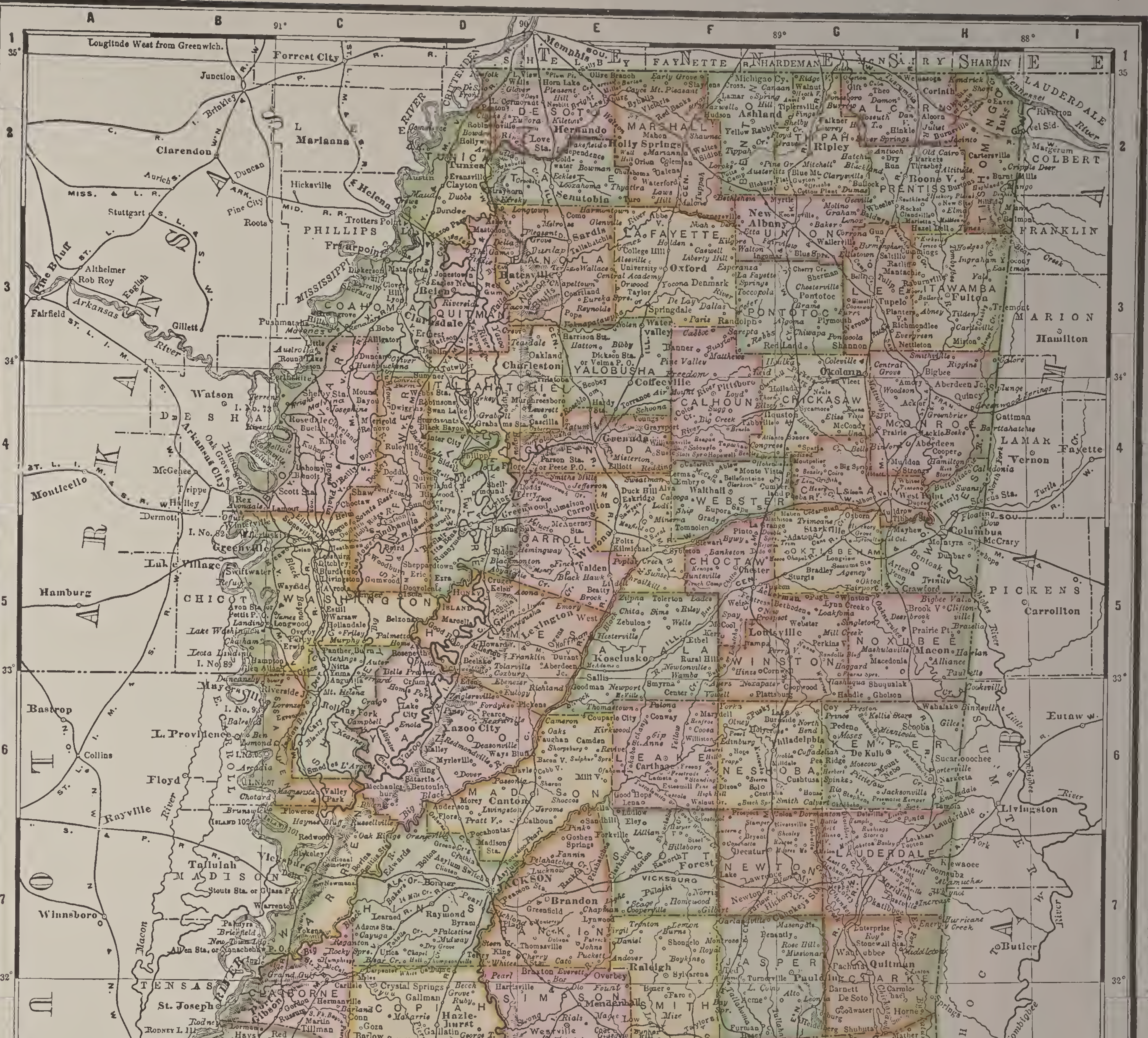
COUNTIES.

Antauga... J 10
Baldwin Q 6
Barbour M 15
Bibb . .. I 8
Blount E 10
Bullock. L 13
Butler M 10
Calhoun F 13
Chambers I 15
Cherokee.. D 14
Chilton...... I 10
Choctaw ... M 3
Clarke...... N 5
Clay .. H 13
Cleburne ... F 14
Coffee . .. O 12
Colbert B 5
Conecuh .. O 8
Coosa . I 11
Covington.. O 10
Crenshaw . N 11
Cullman . . D 9
Dale ...... O 14
Dallas .. K 8
Dekalb.. C 13
Elmore .. J 12
Escambia . P 8
Etowah .. D 12
Fayette .. F 5
Franklin.... C 5
Geneva ..... P 13
Greene...... I 5
Hale .... I 6
Henry . ... O 15
Houston .... P 15
Jackson .... B 12
Jefferson ... F 9
Lamar ...... E 4
Lauderdale. A 5
Lawrence .. B 7
Lee . . ... J 11
Limestone... A 8
Lowndes .. L 10
Macon...... K 14
Madison ... A 10
Marengo ... K 6
Marion ...... D 5
Marshall .. C 11
Mobile..... Q 4
Monroe N 7
Montgomery L 12
Morgan..... C 9
Perry .... J 7
Pickens..... G 4
Pike .. .... M 13
Randolph.. G 14
Russell ..... K 15
Shelby ...... G 10
St. Clair .... E 11
Sumter ..... J 4
Talladega .. G 12
Tallapoosa .. I 13
Tuscaloosa. G 6
Walker ..... E 7
Washington N 4
Wilcox ..... M 7
Winston .... D 7

CHIEF CITIES.

Pop. Thousands.
38 Mobile... R 5
38 Birmingham G 10
30 Montgomery K 12
10 Anniston F 13
9 Selma .... K 9
8 Huntsville B 10
6 Florence.. A 6
6 Bessemer G 8
5 Tuscaloosa H 6
3 Talladega G 12
5 Eufaula . M 16
4 New Decatur B 8
4 Gadsden.. E 13
4 Opelika ... J 15
4 Phœnix... K 16
4 Troy ..... M 12
4 Girard ... K 16
3 Blocton... H 8
3 Pratt City F 9
3 Sheffield . B 5
3 Dothan ... P 15
3 Greenville M 10
3 Decatur .. B 9
3 Avondale F 10
3 Lanett...... I 14
3 Union Springs L 14
3 Demopolis K 5
2 Dolomite F 9
2 Greensboro J 6
2 Eastlake.. G 10
2 Tuscumbia B 5
2 Tuskegee K 14
2 Ensley .. F 9
2 Prattville K 10
2 Piedmont E 14
2 Marion ... J 7
2 Attalla.. D 12
2 Jasper .. E 5
2 Lafayette . I 15
2 Russellville C 5
2 Ozark... . O 14
1 Blossburg F 8
1 Albertville C 12
1 Wylam... F 9
1 Auburn ... J 15
1 Thomas .. F 9
1 Tallassee.. J 13
1 Brookwood G 7
1 Brewton.. P 8
1 Oxford ... F 13
1 Montevallo H 9
1 North Birmingham ..... F 9
1 Evergreen. O 8
1 Cullman .. D 9
1 Bridgeport A 13
1 Oxanna ... F 13
1 Jacksonville E 14
1 Roanoke . H 15
1 Dadeville . I 14
1 Columbia. P 16
1 Whistler . Q 4
1 Wilsonville G 10
1 Fort Deposit M 10
1 Columbiana H 10
1 Alexander City E 13
1 Uniontown K 6
1 Jackson . N 5
1 Fort Payne C 14
1 Geneva ... P 13
1 Warrior .. E 9





MISSISSIPPI

Land area, 46,340 sq. m.
Water area, 470 sq. m.
Pop. 1900, 1,551,270
Male ... 781,451
Female . 769,819
Native 1,543,289
Foreign ... 7,981
White ... 641,200
African . 907,630
Chinese 237
Indian 2,203

COUNTIES.

Adams	B	9
Alcorn	G	2
Amite	C	9
Attala	E	5
Benton	F	2
Bolivar	C	4
Calhoun	F	4
Carroll	E	5
Chickasaw	G	4
Choctaw	F	5
Claiborne	C	8
Clarke	G	7
Clay	G	4
Coahoma	C	3
Copiah	D	8
Covington	E	8
De Soto	E	2
Franklin	C	9
Greene	G	9
Grenada	E	4
Hancock	F	11
Harrison	F	10
Hinds	D	7
Holmes	D	5
Issaquena	C	6
Itawamba	H	3
Jackson	G	10
Jasper	F	7
Jefferson	C	8
Jones	F	8
Kemper	G	6
Lafayette	F	3
Lamar	F	9
Lauderdale	G	7
Lawrence	E	8
Leake	F	6
Lee	G	3
Leflore	D	4
Lincoln	D	8
Lowndes	H	5
Madison	E	6
Marion	E	9
Marshall	F	2
Monroe	H	4
Montgomery	E	5
Neshoba	F	6
Newton	F	7
Noxubee	H	5
Oktibbeha	G	5
Panola	E	3
Pearl River	F	10
Perry	F	9
Pike	D	9
Pontotoc	G	3
Prentiss	H	2
Quitman	D	3
Rankin	E	7
Scott	F	7
Sharkey	C	6
Simpson	E	8
Smith	F	8
Sunflower	D	4
Tallahatchie	D	4
Tate	E	2
Tippah	G	2
Tishomingo	H	2
Tunica	D	2
Union	G	3
Warren	C	7
Washington	C	5
Wayne	G	8
Webster	F	4
Wilkinson	B	9
Winston	F	5
Yalobusha	E	3
Yazoo	D	6

CHIEF CITIES.

Pop.—Thousands.

15	Vicksburg	C	7
14	Meridian	G	7
12	Natchez	B	8
8	Jackson	D	7
8	Greenville	B	5
6	Columbus	H	5
5	Biloxi	G	11
5	Yazoo City	D	6
4	McComb	D	9
4	Water Valley	F	3
4	Corinth	H	2
3	Aberdeen	H	4
3	Canton	D	6
3	Wesson	D	8
3	Laurel	F	8
3	West Point	H	4
3	Greenwood	D	4
3	Bay St. Louis	F	11
3	Holly Springs	F	2
3	Brookhaven	D	8
3	Grenada	E	4
2	Winona	E	5
2	Okolona	G	3
2	Tupelo	G	3
2	Port Gibson	C	8
2	Kosciusko	E	5
2	Macon	H	5
2	Pass Christian	F	11
2	Scranton	H	11
2	Starkville	G	5
2	Mosspoint	H	11
2	Ellisville	F	8
2	Oxford	F	3

KENTUCKY

Land area, 40,000 sq. m.
Water area, 400 sq. m.
Pop. 1900, 2,147,174

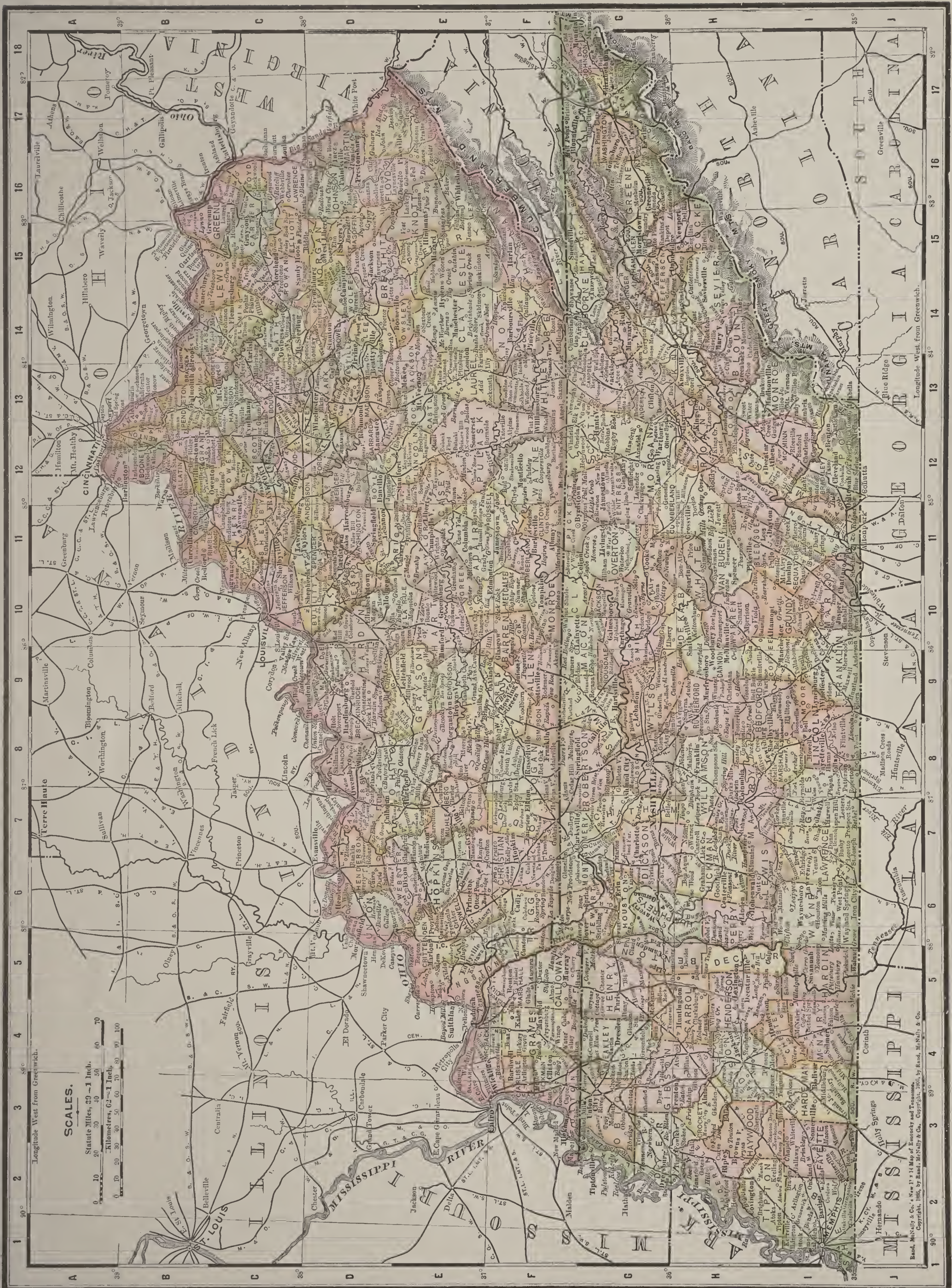
COUNTIES.

Adair ... E 11
Allen ... F 9
Anderson ... C 12
Ballard ... E 3
Barren ... F 10
Bath ... C 14
Bell ... F 14
Boone ... B 12
Bourbon ... C 13
Boyd ... C 16
Boyle ... D 12
Bracken ... B 13
Breathitt ... D 15
Breckinridge D 9
Bullitt ... D 10
Butler ... E 8
Caldwell ... E 6
Calloway ... F 5
Campbell ... B 13
Carlisle ... F 4
Carroll ... B 11
Carter ... C 15
Casey ... E 12
Christian ... F 6
Clark ... D 13
Clay ... E 14
Clinton ... F 11
Crittenden E 5
Cumberland F 11
Daviess ... D 7
Edmonson ... E 9
Elliott ... C 15
Estill ... D 14
Fayette ... C 12
Fleming ... C 14
Floyd ... D 16
Franklin ... C 12
Fulton ... F 3
Gallatin ... B 12
Garrard ... D 12
Grant ... B 12
Graves ... F 4
Grayson ... E 9
Green ... E 10
Greenup ... B 16
Hancock ... D 8
Hardin ... D 9
Harlan ... F 15
Harrison ... C 13
Hart ... E 10
Henderson ... D 6
Henry ... C 11
Hickman ... F 4
Hopkins ... E 6
Jackson ... E 13
Jefferson ... C 10
Jessamine ... D 12
Johnson ... D 16
Kenton ... B 12
Knott ... E 16
Knox ... F 14
Larue ... E 10
Laurel ... E 13
Lawrence ... C 16
Lee ... D 14
Leslie ... E 15
Letcher ... E 16
Lewis ... C 15
Lincoln ... E 12
Livingston ... E 5
Logan ... F 8
Lyon ... F 5
McCracken ... E 4
McLean ... D 7
Madison ... D 13
Magoffin ... D 15
Marion ... D 11
Marshall ... F 5
Martin ... D 16
Mason ... B 14
Meade ... D 9
Menifee ... D 14
Mercer ... D 12
Metcalfe ... F 10
Monroe ... F 10
Montgomery C 14
Morgan ... D 15
Muhlenberg E 7
Nelson ... D 10
Nicholas ... C 13
Ohio ... D 8
Oldham ... C 11
Owen ... C 12
Owsley ... E 14
Pendleton ... B 13
Perry ... E 15
Pike ... E 16
Powell ... D 14
Pulaski ... E 12
Robertson ... B 13
Rockcastle ... E 13
Rowan ... C 15
Russell ... E 11
Scott ... C 12
Shelby ... C 11
Simpson ... F 8
Spencer ... D 11
Taylor ... E 11
Todd ... F 7
Trigg ... F 6
Trimble ... B 11
Union ... D 6
Warren ... F 9
Washington D 11
Wayne ... F 12
Webster ... D 6
Whitley ... F 13
Wolfe ... D 11
Woodford ... C 12

CHIEF CITIES.

Pop. Thousands.

205 Louisville C 10
43 Covington A 12
28 Newport A 13
26 Lexington C 13
19 Paducah E 4
13 Owensboro D 8
10 Henderson D 6
9 Frankfort C 12
8 Bowling Green F 9
7 Hopkinsville F 7
7 Ashland C 16
6 Maysville B 14
6 Bellevue (Sta., Newport P.O.)
6 Dayton A 13
6 Winchester D 13
5 Richmond D 13
5 Paris C 13
4 Danville D 12
4 Middlesboro F 14



TENNESSEE

Land area, 41,750 sq. m.
Water area, 300 sq. m.
Pop. 1900 2,020,616

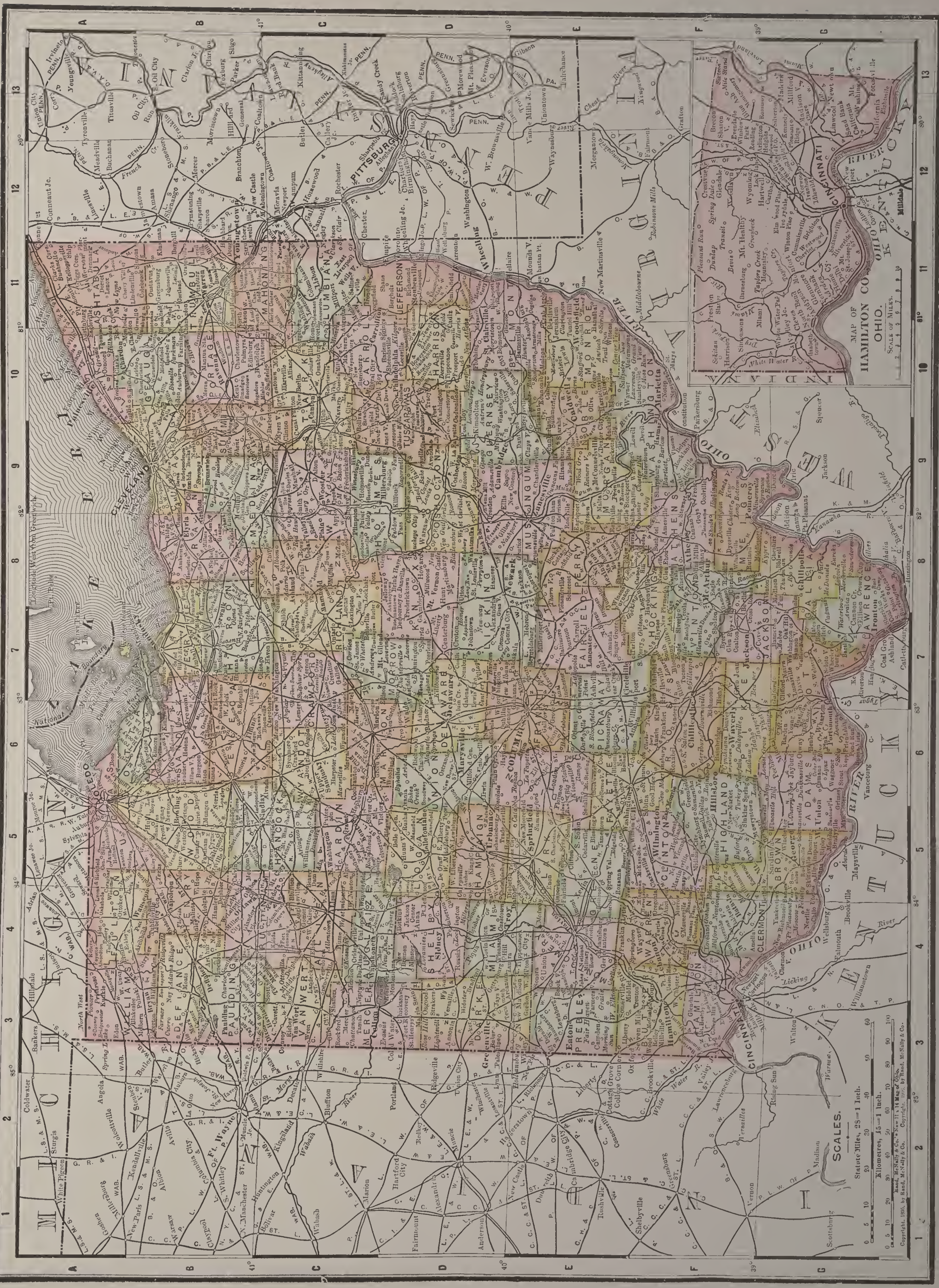
COUNTIES.

Anderson ... G 13
Bedford ... H 9
Benton ... G 5
Bledsoe ... H 11
Blount ... H 14
Bradley ... I 12
Campbell ... G 13
Cannon ... H 9
Carroll ... H 5
Carter ... G 17
Cheatham ... G 7
Chester ... I 4
Claiborne ... G 14
Clay ... F 10
Cocke ... H 15
Coffee ... I 9
Crockett ... H 3
Cumberland G 11
Davidson ... G 8
Decatur ... H 5
Dekalb ... H 10
Dickson ... G 7
Dyer ... G 3
Fayette ... I 3
Fentress ... G 12
Franklin ... I 9
Gibson ... G 3
Giles ... I 7
Grainger ... G 14
Greene ... G 16
Grundy ... I 10
Hamblen ... G 15
Hamilton ... I 11
Hancock ... G 15
Hardeman ... I 3
Hardin ... I 5
Hawkins ... G 15
Haywood ... H 3
Henderson ... H 5
Henry ... G 5
Hickman ... H 7
Houston ... G 6
Humphreys ... G 6
Jackson ... G 10
James ... I 11
Jefferson ... G 15
Johnson ... G 18
Knox ... G 14
Lake ... G 2
Lauderdale H 2
Lawrence ... I 7
Lewis ... I 7
Lincoln ... I 8
Loudon ... H 13
McMinn ... I 12
McNairy ... I 4
Macon ... G 9
Madison ... H 4
Marion ... I 10
Marshall ... I 8
Maury ... H 7
Meigs ... I 12
Monroe ... I 13
Montgomery G 7
Moore ... I 9
Morgan ... G 12
Obion ... G 3
Overton ... G 11
Perry ... H 6
Pickett ... F 11
Polk ... I 12
Putnam ... G 11
Rhea ... H 12
Roane ... H 12
Robertson ... F 8
Rutherford ... H 9
Scott ... G 12
Sequatchie ... I 11
Sevier ... H 15
Shelby ... I 2
Smith ... G 10
Stewart ... G 6
Sullivan ... G 17
Sumner ... G 8
Tipton ... I 2
Trousdale ... G 9
Unicoi ... G 17
Union ... G 14
Van Buren ... H 11
Warren ... H 10
Washington G 17
Wayne ... I 6
Weakley ... G 4
White ... H 11
Williamson ... H 8
Wilson ... G 9

CHIEF CITIES.

Pop.—Thousands.

102 Memphis I 2
81 Nashville G 8
33 Knoxville H 13
30 Chattanooga I 11
15 Jackson H 4
9 Clarksville F 7
6 Columbia H 8
5 Bristol ... F 17
5 Johnson City G 17
4 Murfreesboro H 9
4 Cleveland I 12
4 Dyersburg G 3
3 Harriman H 13
3 Union City G 3
3 Morristown G 15
3 Rockwood H 12
3 Humboldt H 4
3 Pulaski ... I 7
3 Covington H 2
3 Fayetteville I 8
3 Tullahoma I 9
3 Brownsville H 3
2 Hill City ... I 11
2 Coalcreek G 13
2 Gallatin ... G 8
2 Trenton ... H 3
2 Maryville H 14
2 Shelbyville I 9
2 Franklin ... H 8



OHIO

Land area, 40,760 sq. m.
Water area, 300 sq. m.
Pop. 1900, 4,157,545
Male 2,102,655
Female 2,054,890
Native 3,698,811
Foreign 458,734
White 4,060,204
African 96,901
Chinese 371
Japanese 27
Indian 42

COUNTIES.

Adams	G	6
Allen	C	4
Ashland	C	8
Ashtabula	A	11
Athens	F	9
Auglaize	C	4
Belmont	D	10
Brown	G	5
Butler	F	3
Carroll	C	10
Champaign	D	5
Clark	E	5
Clermont	F	4
Clinton	F	5
Columbiana	C	11
Coshocton	D	9
Crawford	C	7
Cuyahoga	B	9
Darke	D	3
Defiance	B	3
Delaware	D	6
Erie	B	7
Fairfield	E	7
Fayette	E	6
Franklin	E	6
Fulton	A	4
Gallia	G	8
Geauga	B	10
Greene	E	5
Guernsey	D	9
Hamilton	F	3
Hancock	C	5
Hardin	C	5
Harrison	D	10
Henry	B	4
Highland	F	5
Hocking	F	8
Holmes	C	9
Huron	B	7
Jackson	F	7
Jefferson	D	11
Knox	D	8
Lake	A	10
Lawrence	G	8
Licking	D	7
Logan	D	5
Lorain	B	8
Lucas	A	5
Madison	E	6
Mahoning	B	11
Marion	C	6
Medina	B	9
Meigs	F	8
Mercer	C	3
Miami	D	4
Monroe	E	10
Montgomery	E	4
Morgan	E	9
Morrow	C	7
Muskingum	E	9
Noble	E	10
Ottawa	A	6
Paulding	B	3
Perry	E	8
Pickaway	E	6
Pike	F	6
Portage	B	10
Preble	E	3
Putnam	B	4
Richland	C	7
Ross	F	6
Sandusky	B	6
Scioto	G	7
Seneca	B	6
Shelby	D	4
Stark	C	10
Summit	B	9
Trumbull	B	11
Tuscarawas	D	9
Union	D	6
Van Wert	C	3
Vinton	F	7
Warren	F	4
Washington	F	10
Wayne	C	9
Williams	A	3
Wood	B	5
Wyandot	C	6

CHIEF CITIES.

Pop.—Thousands.

382	Cleveland	B	9
326	Cincinnati	F	3
132	Toledo	A	6
126	Columbus	E	6
85	Dayton	E	4
45	Youngstown	B	11
43	Akron	B	9
38	Springfield	E	5
31	Canton	C	10
24	Hamilton	F	3
24	Zanesville	E	9
22	Lima	C	4
20	Sandusky	B	7
18	Portsmouth	G	6
18	Mansfield	C	8
18	Findlay	B	5
18	Newark	D	8
16	East Liverpool	C	11
16	Lorain	B	8
14	Steubenville	D	11
13	Marietta	F	10
13	Chillicothe	F	6
13	Ashtabula	A	11
12	Piqua	D	4
12	Massillon	C	9
12	Ironton	G	7
12	Marion	C	6
11	Tiffin	B	6
10	Bellaire	D	11
9	Middletown	E	4
9	Lancaster	E	7
9	Alliance	C	10
9	Elyria	B	8
9	Xenia	E	5
9	Warren	B	11
8	Fremont	B	6
8	Cambridge	D	9
8	Wellston	F	8
8	Delaware	D	6
8	Martins Ferry	D	11
8	Fostoria	B	6
8	Salem	C	11
8	Defiance	B	4
7	Niles	B	11
7	Galion	C	7
7	Conneaut	A	11
7	Norwalk	B	7
7	Circleville	E	7
7	Kenton	C	5
7	Urbana	D	5

INDIANA

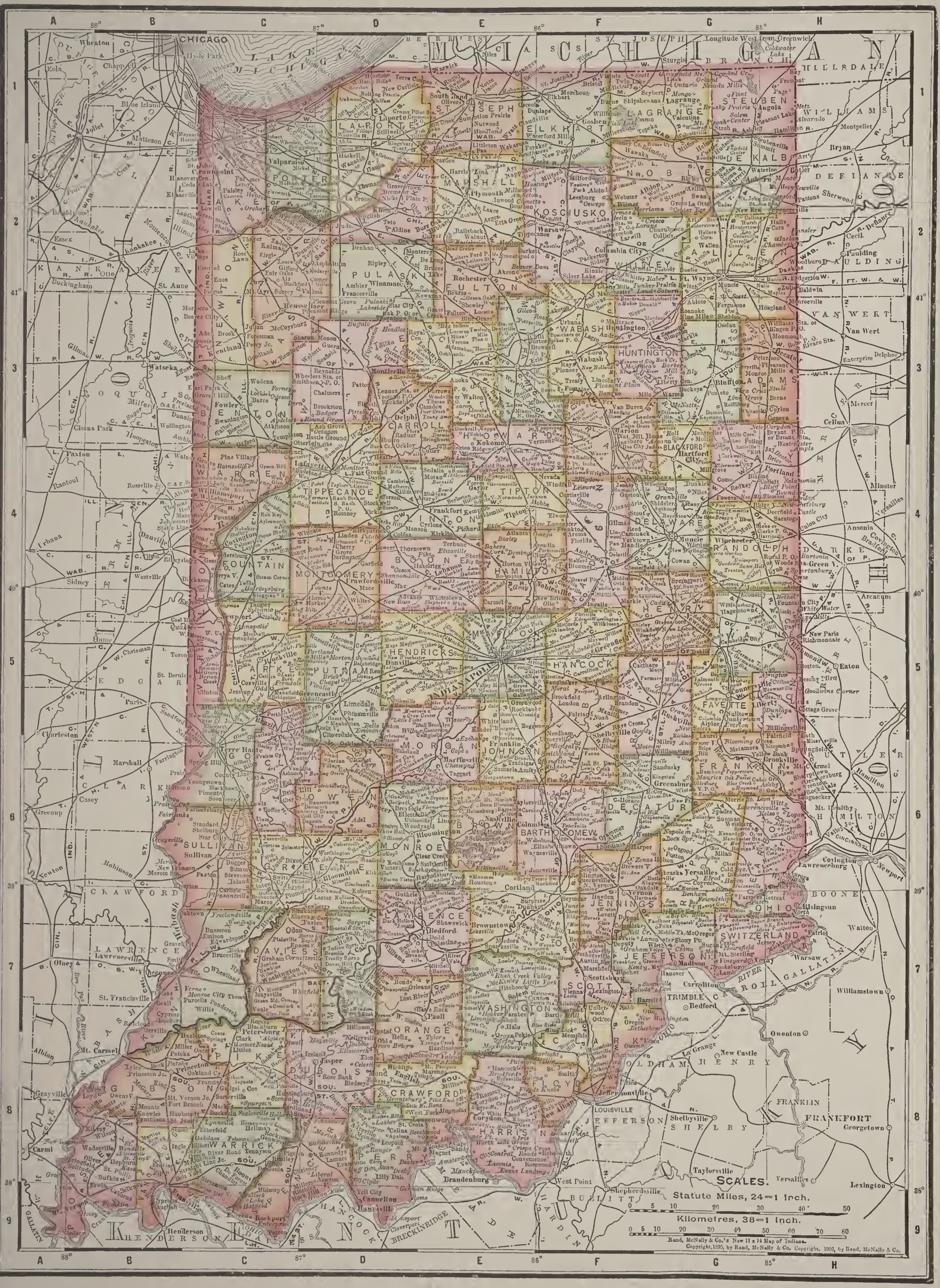
Land area, 35,910 sq. m.
Water area, 440 sq. m.
Pop. 1900, 2,516,462
Male... 1,285,404
Female 1,231,058
Native. 2,374,311
Foreign. 142,121
White. 2,458,502
African... 57,505
Chinese..... 207
Japanese...... 5
Indian........ 243

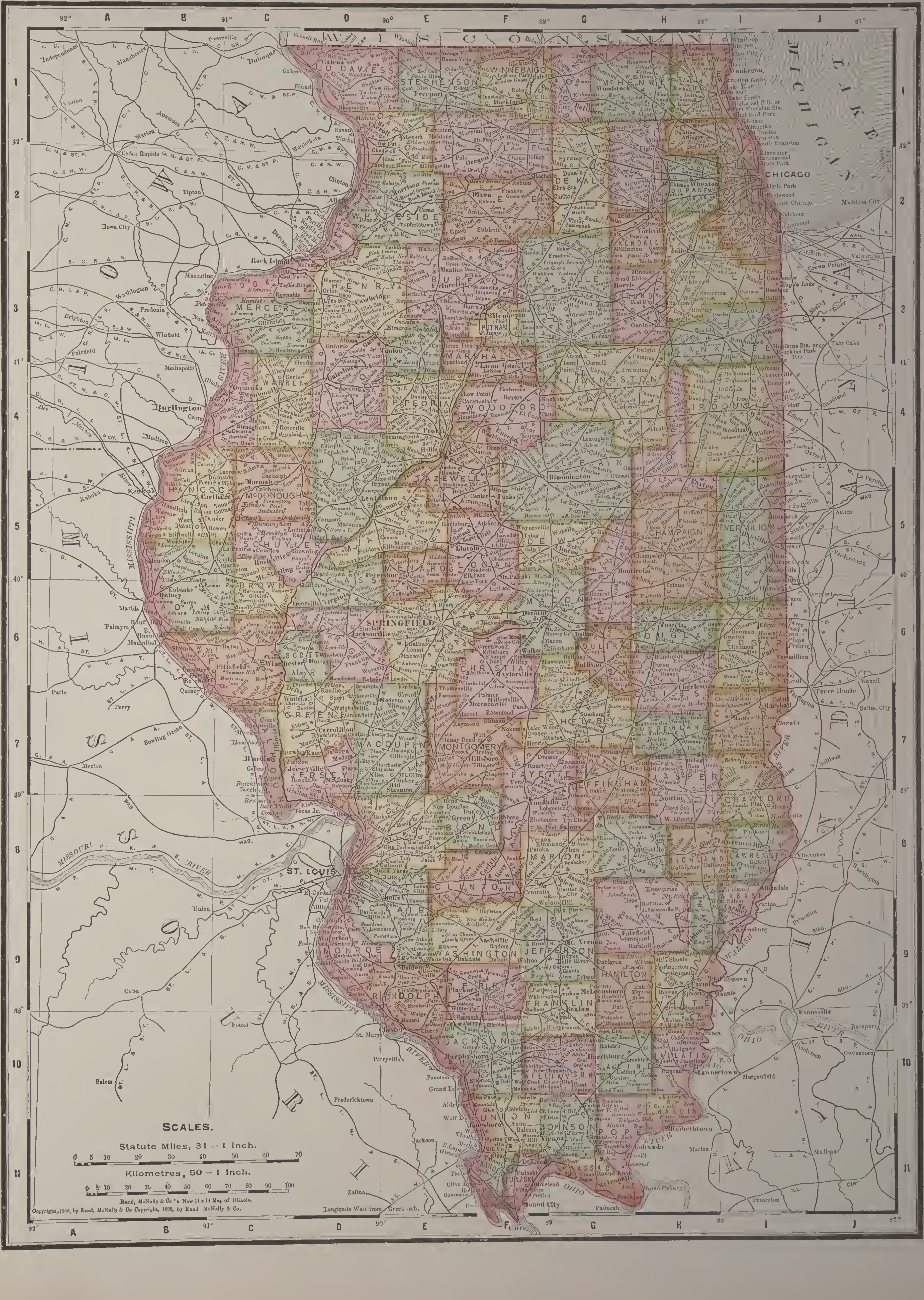
COUNTIES.

Adams......H 3
Allen.........G 2
Bartholomew F 6
Benton.......C 3
Blackford ...G 4
Boone.........E 4
Brown ....E 6
Carroll........D 3
Cass...........E 3
Clark..........F 8
Clay ....C 6
Clinton ....E 4
Crawford ....D 8
Daviess ......C 7
Dearborn.....H 6
Decatur.......F 6
Dekalb.........G 2
Delaware.....G 4
Dubois ....D 8
Elkhart ....F 1
Fayette ....G 5
Floyd ....F 8
Fountain......C 4
Franklin......G 6
Fulton ....E 2
Gibson ....B 8
Grant ....F 3
Greene.........D 6
Hamilton .....E 4
Hancock ......F 5
Harrison .....E 8
Hendricks ...D 5
Henry..........G 5
Howard ....E 3
Huntington . F 3
Jackson.......E 7
Jasper.........C 3
Jay.............G 4
Jefferson .....G 7
Jennings......F 7
Johnson ......E 6
Knox...........C 7
Kosciusko ...F 2
Lagrange .....G 1
Lake ....C 2
Laporte.......D 1
Lawrence ...D 7
Madison .....F 4
Marion ....E 5
Marshall ......E 2
Martin ....D 7
Miami ....E 3
Monroe ....D 6
Montgomery D 4
Morgan ....E 6
Newton ....C 3
Noble ....G 2
Ohio ....H 7
Orange........D 7
Owen ....D 6
Parke ....C 5
Perry ....D 8
Pike ....C 8
Porter........C 2
Posey ....B 8
Pulaski ....D 2
Putnam ....D 5
Randolph.....G 4
Ripley ....G 6
Rush ....F 5
Scott..........F 7
Shelby ....F 5
Spencer.......C 9
St. Joseph ...E 1
Starke ....D 2
Steuben.......G 1
Sullivan......C 6
Switzerland .G 7
Tippecanoe D 4
Tipton ....E 4
Union ....H 5
Vanderburg..B 8
Vermilion ...C 5
Vigo...........C 6
Wabash ....F 3
Wsrren ....C 4
Warrick ......C 8
Washington .E 7
Wayne........G 5
Wells ....G 3
White..........D 3
Whitley.......F 2

CHIEF CITIES.

Pop.—Thousands.
169 Indianapolis E 5
59 Evansville B 9
45 Ft. Wayne G 2
37 Terre Haute C 6
36 South Bend E 1
21 Muncie ..G 4
21 New Albany F 8
20 Anderson. F 4
18 Richmond H 5
18 Lafayette D 4
17 Marion....F 3
16 Logansport E 3
15 Elkhart ...F 1
15 Michigan City D 1
13 Elwood... F 4
12 Hammond C 1
11 Jeffersonville F 8
11 Kokomo . E 4
10 Vincennes B 7
10 Huntington F 3
9 Wabash ... F 3
9 Washington C 7
8 Peru........E 3
8 Columbus..F 6
8 Madison... G 7
8 Goshen.... F 1
8 Brazil ....C 5
7 Alexandria F 4
7 Shelbyville F 5
7 Laporte. . D 1
7 Frankfort .E 4
7 Connersville G 5
7 Crawfordsville D 4
6 Bloomington E 6
6 Seymour .. F 7
6 Valparaiso C 2
6 Bedford . .E 7
6 Princeton . B 8
6 Hartford City G 4
5 Mishawaka E 1
5 Mt. Vernon B 9
5 Greensburg G 6
5 Portland ...H 4





ILLINOIS

Land area, 56,000 sq. m.
Water area, 650 sq. m.
Pop. 1900 4,821,550
Male 2,472,782
Female 2,348,768
Native 3,854,803
Foreign 966,747
White 4,734,873
African 85,078
Chinese 1,503
Japanese 80
Indian 16

COUNTIES.

Adams	B	6
Alexander	F	11
Bond	F	8
Boone	G	1
Brown	C	6
Bureau	E	3
Calhoun	C	7
Carroll	E	1
Cass	D	5
Champaign	H	5
Christian	F	6
Clark	I	7
Clay	H	8
Clinton	F	8
Coles	H	7
Cook	I	2
Crawford	I	8
Cumberland	H	7
Dekalb	G	2
Dewitt	G	5
Douglas	H	6
Dupage	H	2
Edgar	I	6
Edwards	H	9
Effingham	G	7
Fayette	F	7
Ford	H	4
Franklin	G	9
Fulton	D	5
Gallatin	H	10
Greene	D	7
Grundy	H	3
Hamilton	G	9
Hancock	B	5
Hardin	H	10
Henderson	C	4
Henry	D	3
Iroquois	I	4
Jackson	F	10
Jasper	H	7
Jefferson	G	9
Jersey	D	7
Jo Daviess	D	1
Johnson	G	11
Kane	H	2
Kankakee	I	3
Kendall	H	2
Knox	D	4
Lake	H	1
Lasalle	G	3
Lawrence	I	8
Lee	F	2
Livingston	G	4
Logan	F	5
McDonough	C	5
McHenry	H	1
McLean	G	4
Macon	F	6
Macoupin	E	7
Madison	E	8
Marion	G	8
Marshall	F	3
Mason	E	5
Massac	G	11
Menard	E	5
Mercer	C	3
Monroe	D	9
Montgomery	F	7
Morgan	D	6
Moultrie	G	6
Ogle	F	1
Peoria	E	4
Perry	F	9
Piatt	G	5
Pike	C	6
Pope	G	11
Pulaski	F	11
Putnam	F	3
Randolph	E	9
Richland	H	8
Rock Island	C	3
Saline	G	10
Sangamon	E	6
Schuyler	C	5
Scott	D	6
Shelby	G	7
St. Clair	E	9
Stark	E	3
Stephenson	E	1
Tazewell	E	5
Union	F	10
Vermilion	I	5
Wabash	I	8
Warren	C	4
Washington	F	4
Wayne	H	9
White	H	9
Whiteside	E	2
Will	I	3
Williamson	G	10
Winnebago	F	1
Woodford	F	4

CHIEF CITIES.

Pop.—Thousands.

1699	Chicago	I	2
56	Peoria	E	4
36	Quincy	B	6
34	Springfield	E	6
31	Rockford	F	1
30	East St. Louis	D	8
29	Joliet	H	2
24	Aurora	H	2
23	Bloomington	G	5
22	Elgin	H	1
21	Decatur	F	6
19	Rock Island	C	2
19	Evanston	I	1
19	Galesburg	D	4
17	Belleville	E	8
17	Moline	C	3
16	Danville	I	5
15	Jacksonville	D	6
14	Alton	D	8
14	Streator	G	3
14	Kankakee	I	3
13	Freeport	E	1
13	Cairo	F	11
11	Ottawa	G	3
10	Lasalle	F	3
10	Mattoon	H	6
9	Waukegan	I	1
9	Champaign	H	5
9	Lincoln	F	5
8	Pekin	E	4
8	Kewanee	E	3
8	Dixon	F	2
7	Monmouth	C	4
7	Belvidere	G	1
7	Peru	F	3
7	Centralia	F	8
7	Canton	D	4
6	Murphysboro	F	10
6	Sterling	E	2

MICHIGAN

Land area,	57,430 sq. m.
Water area,	1,485 sq. m.
Pop. 1905,	2,530,016
Male	1,248,905
Female	1,172,077
Native	1,879,329
Foreign	541,653
White	2,398,563
African	15,816
Chinese	240
Japanese	9
Indian	6,354

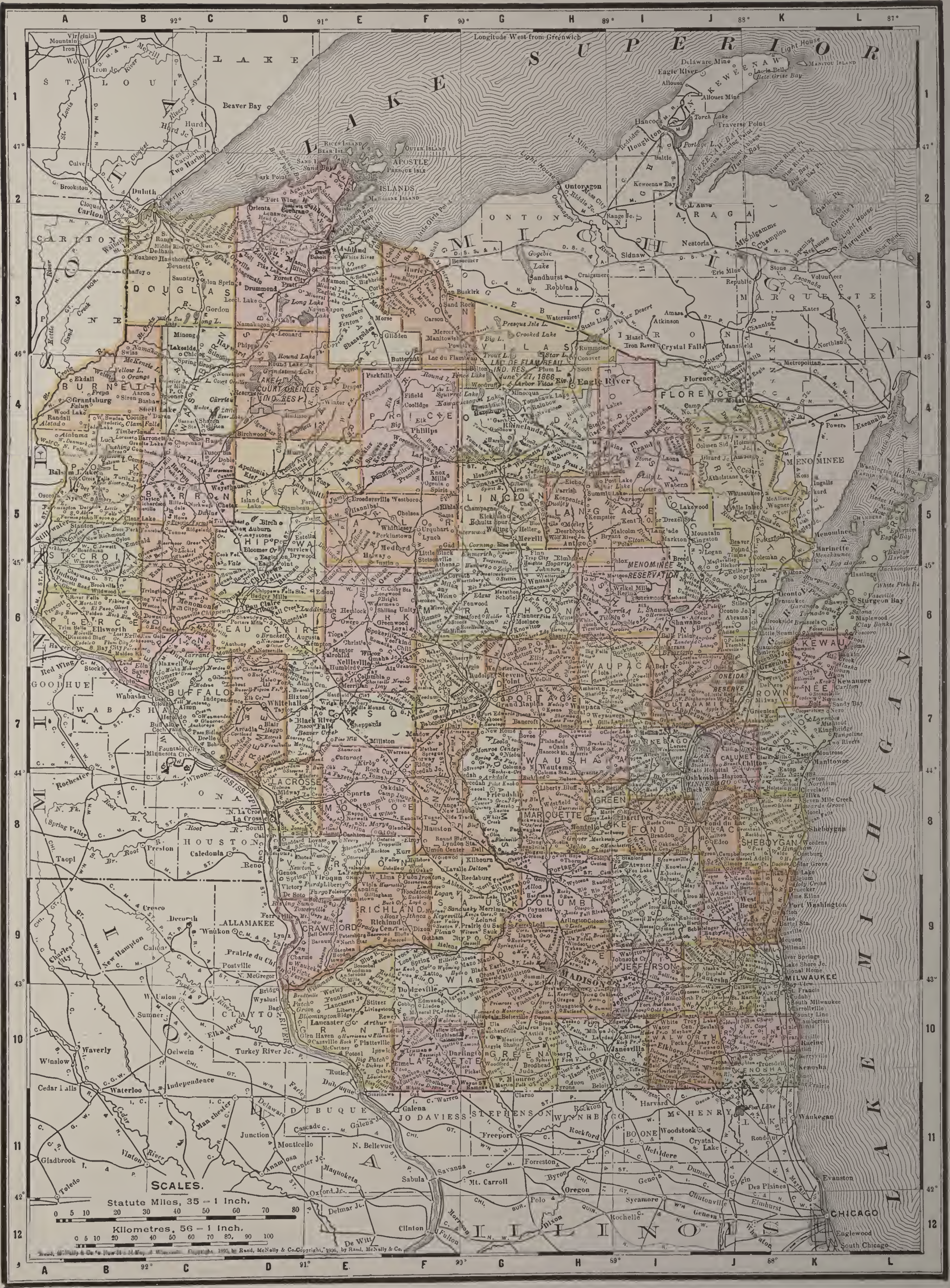
COUNTIES.

Alcona	F	9
Alger	B	6
Allegan	J	5
Alpena	E	9
Antrim	E	6
Arenac	G	9
Baraga	B	3
Barry	J	6
Bay	H	8
Benzie	F	5
Berrien	L	4
Branch	L	6
Calhoun	K	6
Cass	L	4
Charlevoix	E	6
Cheboygan	E	7
Chippewa	B	8
Clare	H	7
Clinton	J	7
Crawford	F	7
Delta	C	6
Dickinson	C	4
Eaton	J	7
Emmet	D	7
Genesee	J	9
Gladwin	G	8
Gogebic	C	2
Grand Traverse	F	5
Gratiot	I	7
Hillsdale	L	7
Houghton	B	30
Huron	H	10
Ingham	J	8
Ionia	J	6
Iosco	G	9
Iron	C	3
Isabella	H	7
Jackson	K	7
Kalamazoo	K	5
Kalkaska	F	6
Kent	I	5
Keweenaw	A	4
Lake	H	5
Lapeer	I	10
Leelanau	F	5
Lenawee	L	8
Livingston	J	8
Luce	B	7
Mackinac	C	8
Macomb	J	10
Manistee	G	4
Marquette	B	4
Mason	G	4
Mecosta	H	6
Menominee	D	5
Midland	H	8
Missaukee	G	6
Monroe	L	9
Montcalm	I	6
Montmorency	E	8
Muskegon	I	4
Newaygo	H	5
Oakland	J	10
Oceana	H	4
Ogemaw	G	8
Ontonagon	B	2
Osceola	H	6
Oscoda	F	8
Otsego	F	7
Ottawa	J	4
Presque Isle	E	8
Roscommon	G	7
Saginaw	I	8
St. Clair	J	11
St. Joseph	L	5
Sanilac	I	11
Schoolcraft	C	6
Shiawassee	J	8
Tuscola	I	9
Van Buren	K	4
Washtenaw	K	9
Wayne	K	10
Wexford	G	5

CHIEF CITIES.

Pop.—Thousands.

318	Detroit	K 10
96	Grand Rapids	I 5
17	Saginaw	I 8
11	Bay City	H 9
30	Kalamazoo	K 5
25	Jackson	K 8
22	Battle Creek	K 6
21	Muskegon	I 4
20	Lansing	J 7
20	Port Huron	J 11
15	Calumet	A 3
15	Flint	I 9
15	Ann Arbor	K 9
13	West Bay City	H 8
13	Manistee	G 4
12	Alpena	E 10
12	Ishpeming	B 4
11	Sault Sainte Marie	B 9
11	Traverse City	F 5
11	Escanaba	D 5
11	Menominee	D 5
11	Pontiac	J 10
11	Adrian	L 8
11	Marquette	B 5
10	Ironwood	B 1
9	Owosso	J 8
9	Holland	J 4
9	Iron Mountain	C 4
8	Ypsilanti	K 9
7	Ludington	H 3
7	Mount Clemens	J 11
7	Cadillac	G 6
7	Negaunee	B 5
7	Cheboygan	D 8
7	Benton Harbor	K 3
7	Delray	K 10
6	Coldwater	L 6
6	Monroe	L 10
6	Hancock	A 3
5	Wyandotte	K 10
5	St Joseph	K 3
5	Grand Haven	I 4
5	Ionia	J 6
5	Petoskey	E 6



WISCONSIN

Land area, 54,450 sq. m.
Water area, 1,590 sq. m.
Pop. 1905. 2,228,949
Male 1,067,562
Female .1,001,480
Native .1,553,071
Foreign ..515,971
Scandinavian 87,771
German 242,777
Other Countries. 185,423
White ...2,057,911
Colored......2,542
Indian 8,372

COUNTIES.

Adams ...G 8
Ashland.....E 3
Barron .....C 5
Bayfield.....D 3
Brown ......K 7
Buffalo......C 7
Burnett.....B 4
Calumet.....J 7
Chippewa...D 5
Clark ....E 6
Columbia...H 9
Crawford ...E 9
Dane ....H 9
Dodge ....I 9
Door ....L 6
Douglas......C 3
Dunn.........C 6
Eauclaire...D 6
Florence ....J 4
Fond du Lac I 8
Forest ....I 4
Grant ....E 10
Green ....G 10
Green Lake H 8
Iowa ....F 9
Iron..........F 3
Jackson.....E 7
Jefferson ....I 9
Juneau......F 8
Kenosha ....J 10
Kewaunee..K 7
Lacrosse....D 8
Lafayette ...F 10
Langlade ...H 5
Lincoln .....G 5
Manitowoc. K 7
Marathon...G 6
Marinette .. J 5
Marquette ..H 8
Milwaukee .K 9
Monroe .....E 8
Oconto......J 6
Oneida......G 4
Outagamie ..J 7
Ozaukee....K 9
Pepin ....C 6
Pierce ...... B 6
Polk .... B 4
Portage.....H 7
Price........F 4
Racine .....J 10
Richland....F 9
Rock ....H 10
Rusk........D 5
Sauk ....G 9
Sawyer .....D 4
Shawano ....I 6
Sheboygan .K 8
St. Croix ....B 5
Taylor ......E 5
Trempealeau D 7
Vernon .....E 8
Vilas ....G 3
Walworth ...I 10
Washburn ..C 4
Washington J 9
Waukesha .. J 10
Waupaca ....I 7
Waushara ..H 7
Winnebago. I 7
Wood ....F 7

CHIEF CITIES.

Pop.—Thousands.

313 Milwaukee K 9
37 Superior ..B 2
32 Racine . K 10
31 Oshkosh.. J 8
29 La Crosse. D 8
24 Madison ..H 9
24 Sheboygan K 8
23 Greenbay. K 6
19 Eau Claire D 6
17 Fond du Lac J 8
17 Appleton ..J 7
16 Kenosha. K 10
15 Marinette. K 5
15 Ashland .. E 2
14 Wausau...H 6
11 Janesville I 10
13 Beloit.... H 11
13 Manitowoc K 7
9 Merrill .....G 5
9 Stevens Point G 7
9 Chippewa Falls..D 6
9 Watertown. I 9
7 Waukesha..J 9
7 Antigo .....H 5
6 Grand Rapids G 7
6 Neenah.....J 7
6 Marshfield. F 6
6 Menasha....J 7
6 Baraboo ... G 9
6 Oconto.....K 6
6 Beaverdam. I 9
6 Portage ..H 8
5 Menominee C 6
5 Rhinelander G 4
5 South Milwaukee..K 10
5 Kaukauna..J 7
5 Washburn. E 2
5 Sturgeon Bay L 6
5 Berlin.......I 8
5 Two Rivers K 7
5 Depere. .. K 7
4 Platteville E 10
4 Monroe ... G 10
4 Stoughton H 10
4 Port Washington..K 9
4 Ripon.......I 8
4 Sparta......E 8
3 Lake Geneva J 10
3 Rice Lake..C 5
3 Fort Atkinson I 10
3 Mineralpoint F 10
3 Hudson ... A 6
3 Prairie du Chien..D 10
3 Waupun ....I 8
3 Whitewater I 10
3 Oconomowoc J 9
3 Tomah ...E 8
3 New London I 7
3 Wauwatosa J 9

MINNESOTA

Land area, 79,205 sq. m.
Water area, 4,160 sq. m.
Pop. 1900, 1,751,394
Male.... 932,490
Female 818,904
Native 1,246,076
Foreign 505,318
White 1,737,036
African 4,959
Chinese 166
Japanese 51
Indian 9,182

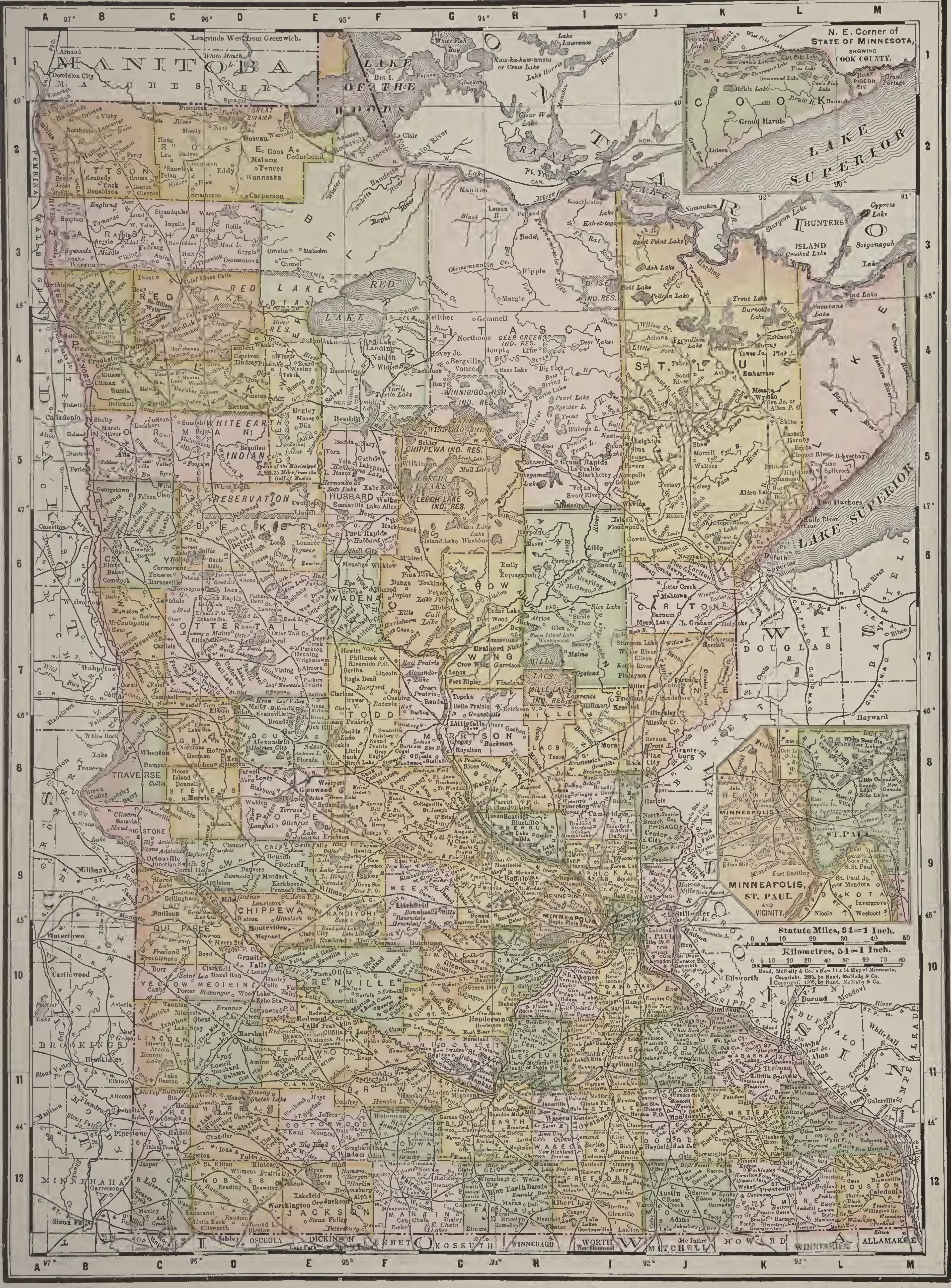
COUNTIES.

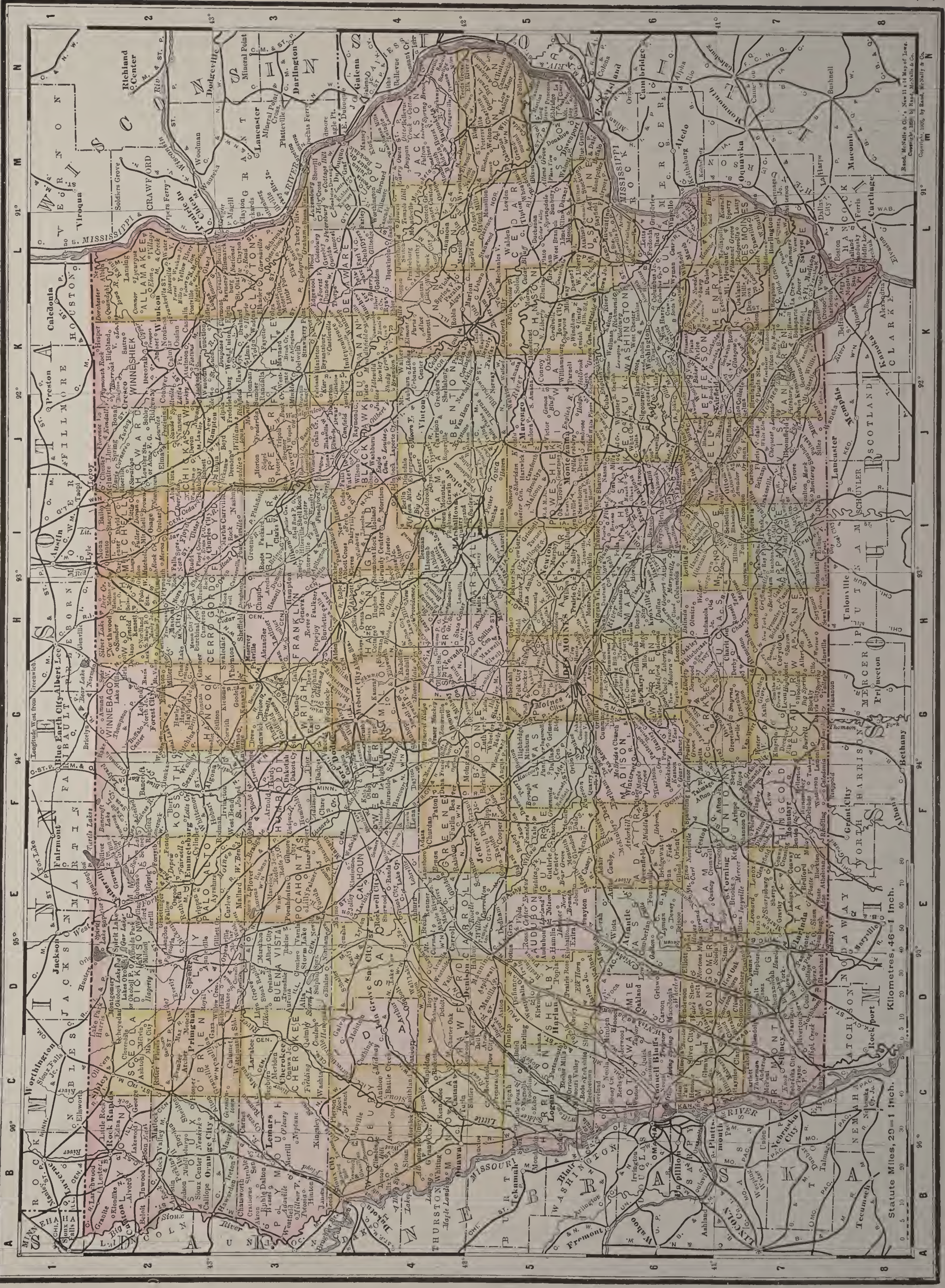
Aitkin	I	6
Anoka	I	9
Becker	D	6
Beltrami	F	3
Benton	H	8
Bigstone	C	9
Blue Earth	G	11
Brown	F	11
Carlton	J	6
Carver	H	10
Cass	G	6
Chippewa	D	9
Chisago	J	9
Clay	C	6
Clearwater	E	4
Cook	K	2
Cottonwood	E	11
Crow Wing	G	6
Dakota	I	10
Dodge	J	12
Douglas	E	8
Faribault	H	12
Fillmore	K	12
Freeborn	I	12
Goodhue	J	11
Grant	D	8
Hennepin	I	9
Houston	L	12
Hubbard	F	5
Isanti	I	8
Itasca	H	4
Jackson	E	12
Kanabec	I	8
Kandiyohi	F	9
Kittson	B	2
Lac qui Parle	C	10
Lake	M	4
Lesueur	H	11
Lincoln	C	11
Lyon	D	11
McLeod	G	10
Marshall	C	3
Martin	F	12
Meeker	F	9
Millelacs	H	7
Morrison	G	8
Mower	J	12
Murray	D	11
Nicollet	G	11
Nobles	D	12
Norman	C	5
Olmsted	K	11
Ottertail	D	7
Pine	J	7
Pipestone	C	11
Polk	C	4
Pope	E	8
Ramsey	I	9
Red Lake	C	3
Redwood	E	11
Renville	F	10
Rice	I	11
Rock	C	12
Roseau	D	2
Scott	I	10
Sherburne	H	9
Sibley	G	10
St. Louis	K	4
Stearns	F	8
Steele	I	11
Stevens	C	8
Swift	D	9
Todd	F	7
Traverse	C	8
Wabasha	K	11
Wadena	F	6
Waseca	H	12
Washington	J	9
Watonwan	F	12
Wilkin	B	7
Winona	L	12
Wright	H	9
Yellow Medicine	D	10

CHIEF CITIES.

Pop.—Thousands.

203	Minneapolis	K	8
163	St. Paul	L	9
53	Duluth	K	6
20	Winona	L	11
12	Stillwater	J	9
11	Mankato	G	11
9	St. Cloud	G	8
8	Faribault	I	11
8	Red Wing	K	10
8	Brainerd	G	7
7	Rochester	J	12
6	Fergus Falls	C	7
6	LittleFalls	G	8
6	Owatonna	I	11
5	Austin	J	12
5	New Ulm	F	11
5	Crookston	B	4
5	Albert Lea	I	12
4	St. Peter	G	11
4	Hastings	J	10
4	Anoka	I	9
4	Moorhead	B	6
4	Ely	L	4
3	Willmar	E	9
3	Two Harbors	L	5
3	Northfield	I	11
3	Waseca	H	11
3	Cloquet	K	2
3	Fairmont	G	16
3	Virginia	J	4
3	Blue Earth	H	12
3	Eveleth	J	5
3	Lake City	K	11
3	Alexandria	E	8
3	St. James	F	11
3	Pipestone	C	12
3	Wabasha	K	11
2	Hutchinson	G	10
2	Hibbing	J	5
2	Worthington	E	12
2	S. St. Paul	I	10
2	Litchfield	F	9
2	Luverne	C	12
2	Sauk Center	F	8
2	Bemidji	F	5
2	Chaska	H	10
2	Montevideo	D	10
2	Marshall	D	11
2	East Grand Forks	B	4
2	Detroit City	D	6
2	Shakopee	I	10
2	Sleepy Eye	F	11





IOWA

Land area, 55,475 sq. m.
Water area, 550 sq. m.
Pop. 1900, 2,231,853
Male . 1,156,849
Female 1,075,004
Native 1,925,933
Foreign 305,920
White 2,218,667
African 12,693
Chinese 101
Japanese ... 7
Indian 382

COUNTIES.

Adair	F	6
Adams	E	6
Allamakee	L	2
Appanoose	I	7
Audubon	E	5
Benton	J	4
Blackhawk	J	4
Boone	G	5
Bremer	J	3
Buchanan	K	4
Buena Vista	D	3
Butler	I	3
Calhoun	E	4
Carroll	E	4
Cass	E	6
Cedar	L	5
Cerro Gordo	H	2
Cherokee	C	3
Chickasaw	J	2
Clarke	G	6
Clay	D	2
Clayton	L	3
Clinton	M	5
Crawford	D	4
Dallas	F	5
Davis	J	7
Decatur	G	7
Delaware	L	4
Des Moines	L	7
Dickinson	D	2
Dubuque	M	4
Emmet	E	2
Fayette	K	3
Floyd	I	2
Franklin	H	3
Fremont	C	7
Greene	F	4
Grundy	I	4
Guthrie	E	5
Hamilton	G	4
Hancock	G	2
Hardin	H	4
Harrison	C	5
Henry	K	6
Howard	J	2
Humboldt	F	3
Ida	C	4
Iowa	J	5
Jackson	M	4
Jasper	H	5
Jefferson	K	6
Johnson	K	5
Jones	L	4
Keokuk	J	6
Kossuth	F	2
Lee	L	7
Linn	K	4
Louisa	L	6
Lucas	H	6
Lyon	B	2
Madison	F	6
Mahaska	I	6
Marion	H	6
Marshall	H	5
Mills	C	6
Mitchell	I	2
Monona	B	4
Monroe	I	6
Montgomery	D	6
Muscatine	L	6
O'Brien	C	2
Osceola	C	2
Page	D	7
Palo Alto	E	2
Plymouth	B	3
Pocahontas	E	3
Polk	G	5
Pottawattamie	C	6
Poweshiek	I	5
Ringgold	F	7
Sac	D	4
Scott	M	5
Shelby	D	5
Sioux	B	2
Story	H	4
Tama	I	4
Taylor	E	7
Union	F	6
Van Buren	K	7
Wapello	J	6
Warren	G	6
Washington	K	6
Wayne	H	7
Webster	F	4
Winnebago	G	2
Winneshiek	K	2
Woodbury	C	4
Worth	H	2
Wright	G	4

CHIEF CITIES.

Pop. Thousands.			
76	Des Moines	H	5
42	Dubuque	M	4
41	Sioux City	B	4
40	Davenport	M	5
29	Cedar Rapids	K	5
25	Burlington	L	7
25	Council Bluffs	C	6
23	Clinton	N	5
20	Ottumwa	J	7
18	Waterloo	J	4
15	Muscatine	L	6
15	Keokuk	L	8
14	Fort Dodge	F	4
12	Marshalltown	I	4
10	Oskaloosa	I	6
10	Boone	G	4
9	Fort Madison	L	7
8	Iowa City	K	5
8	Creston	F	6
8	Mason City	H	2
6	Centerville	I	7
6	Oelwein	K	3
5	Cedar Falls	J	4
5	Atlantic	E	6
5	Lemars	B	3
5	Fairfield	J	6
5	Red Oak	D	7
5	Webster City	G	4
5	Grinnell	I	5
5	Charles City	I	2
4	Washington	K	6
4	Newton	I	5
4	Shenandoah	D	7
4	Perry	F	5
4	Marion	K	5
4	Charlton	H	

MISSOURI

Land area, 68,735 sq. m.
Water area, 680 sq. m.
Pop. 1900, 3,106,665
Male 1,595,710
Female 1,510,955
Native 2,890,286
Foreign 216,379
White 2,944,843
African 161,234
Chinese 449
Japanese.....9
Indian 130

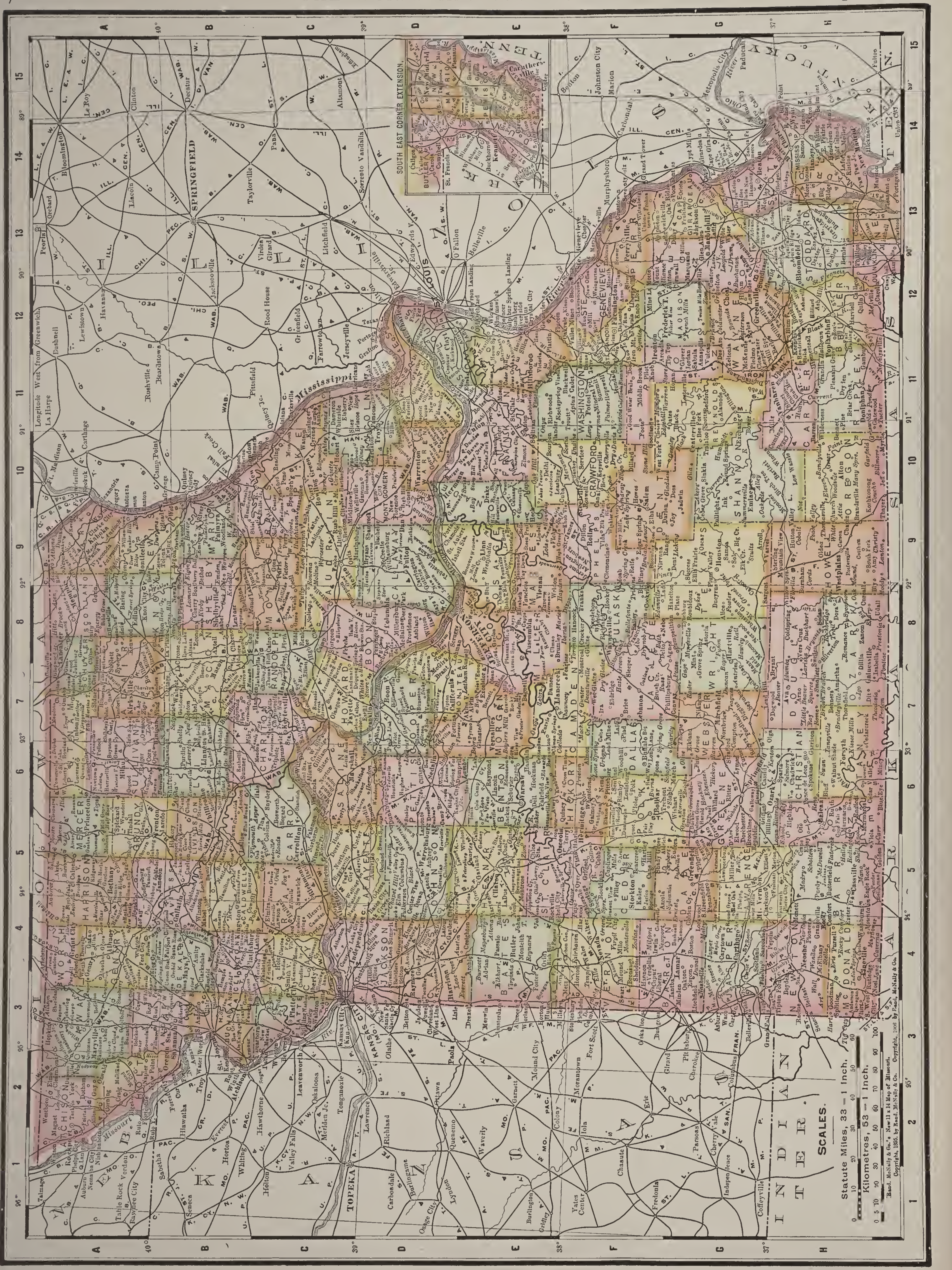
COUNTIES.

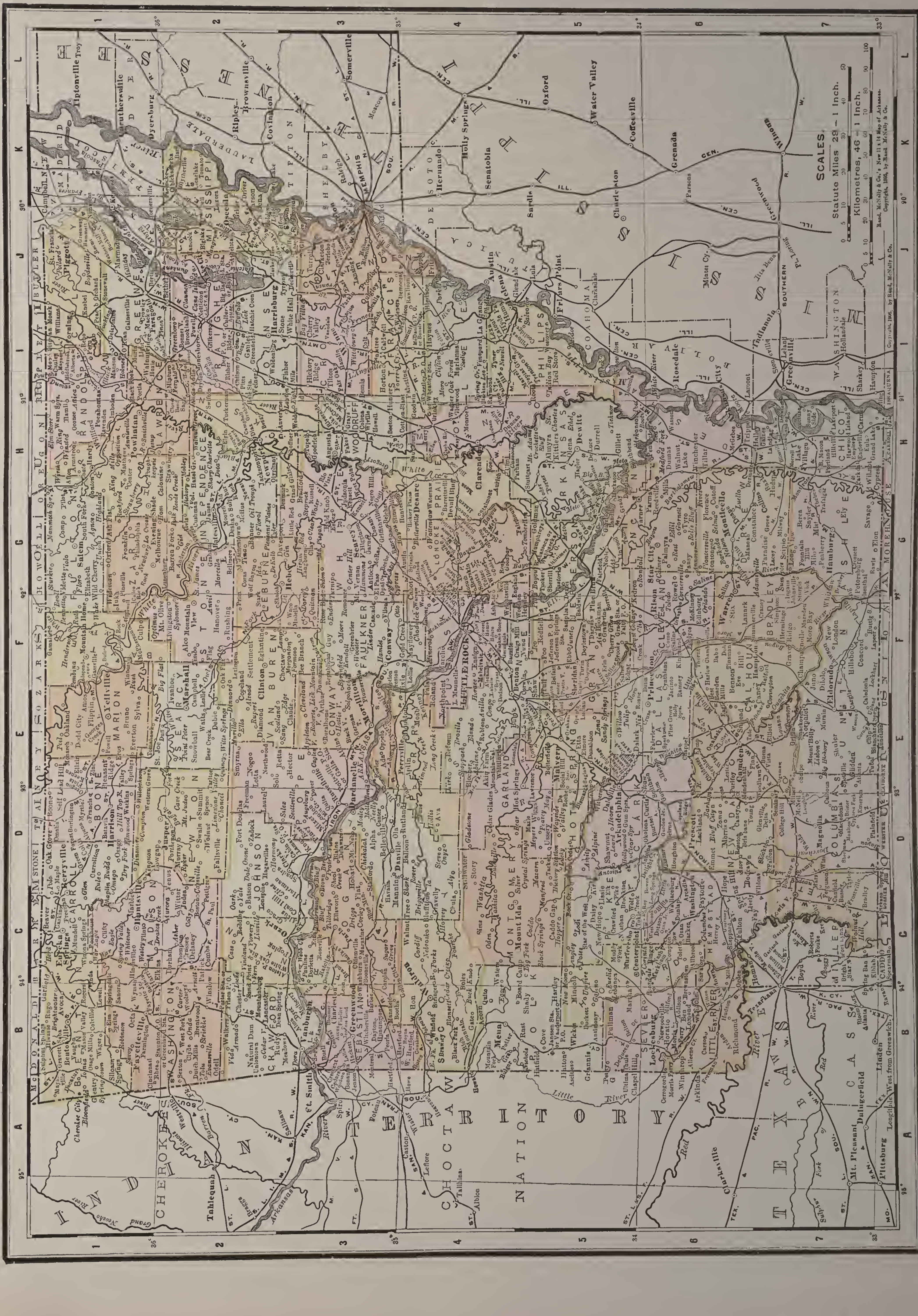
Adair	A	7
Andrew	B	3
Atchison	A	2
Audrain	C	9
Barry	H	5
Barton	F	4
Bates	E	4
Benton	E	6
Bollinger	G	12
Boone	D	8
Buchanan	B	3
Butler	H	12
Caldwell	B	4
Callaway	D	9
Camden	E	7
Cape Girardeau	G	13
Carroll	C	5
Carter	H	11
Cass	D	4
Cedar	F	5
Chariton	B	6
Christian	H	6
Clark	A	9
Clay	C	4
Clinton	B	4
Cole	D	8
Cooper	D	7
Crawford	F	10
Dade	G	5
Dallas	F	6
Daviess	B	4
Dekalb	B	4
Dent	F	10
Douglas	H	8
Dunklin	E	14
Franklin	E	10
Gasconade	E	10
Gentry	A	4
Greene	G	6
Grundy	A	5
Harrison	A	4
Heury	E	5
Hickory	E	5
Holt	A	2
Howard	C	7
Howell	H	9
Iron	F	11
Jackson	D	4
Jasper	G	4
Jefferson	E	11
Johnson	D	5
Knox	A	8
Laclede	F	7
Lafayette	C	5
Lawrence	G	5
Lewis	A	9
Liucolu	C	10
Linn	B	6
Livingston	B	5
McDonald	H	4
Macon	B	7
Madison	G	12
Maries	E	9
Marion	B	9
Mercer	A	5
Miller	E	8
Mississippi	H	14
Moniteau	D	7
Monroe	C	8
Montgomery	D	10
Morgan	E	7
New Madrid	H	13
Newton	H	4
Nodaway	A	3
Oregon	H	10
Osage	E	9
Ozark	H	8
Pemiscot	E	15
Perry	F	13
Pettis	D	6
Phelps	F	9
Pike	C	10
Platte	C	3
Polk	F	6
Pulaski	F	8
Putnam	A	6
Ralls	C	9
Randolph	C	7
Ray	C	4
Reynolds	G	11
Ripley	H	11
Saline	C	6
Schuyler	A	7
Scotland	A	8
Scott	G	13
Shannon	G	10
Shelby	B	8
St. Charles	D	11
St. Clair	E	5
St. Francois	F	12
Ste. Genevieve	F	12
St. Louis	D	12
St. Louis City	D	12
Stoddard	H	13
Stone	H	6
Sullivan	A	6
Taney	H	6
Texas	G	9
Vernon	F	4
Warren	D	10
Washington	F	11
Wayne	G	12
Webster	G	7
Worth	A	4
Wright	G	8

CHIEF CITIES.

Pop.—Thousands.

575	St. Louis	D	12
164	Kansas City	C	3
103	St. Joseph	B	3
26	Joplin	G	3
23	Springfield	G	6
15	Sedalia	D	6
13	Hannibal	B	10
10	Jefferson City	E	8
9	Carthage	G	4
9	Webb City	G	4
8	Moberly	C	8
8	St. Charles	D	12
7	Nevada	F	4
7	Iudepeudence	C	4
7	Chillicothe	B	6
6	Aurora	H	5
6	Kirksville	A	7
6	Columbia	D	8
6	De Soto	E	11
5	Brookfield	B	6
5	Trenton	A	5
5	Louisiana	C	11
5	Mexico	C	9
5	Marshall	C	6
	Clinton	E	5





ARKANSAS

Land area, 53,045 sq. m.
Water area, 805 sq. m.
Pop. 1900. 1,311,564
Male.... 675,312
Female. 636,252
Native 1,297,275
Foreign.. 14,289
White . 944,580
African 366,856
Chinese 62
Indian 66

COUNTIES.

Arkansas	H 5
Ashley	G 7
Baxter	F 1
Benton	B 1
Boone	D 1
Bradley	F 7
Calhoun	F 6
Carroll	C 1
Chicot	H 7
Clark	D 5
Clay	J 1
Cleburne	G 2
Cleveland	F 6
Columbia	D 7
Conway	E 3
Craighead	I 2
Crawford	B 2
Crittenden	J 3
Cross	I 3
Dallas	E 6
Desha	H 6
Drew	G 6
Faulkner	F 3
Franklin	C 2
Fulton	G 1
Garland	D 4
Grant	F 5
Greene	I 1
Hempstead	C 6
Hot Spring	E 5
Howard	C 5
Independence	H 2
Izard	G 1
Jackson	H 2
Jefferson	G 5
Johnson	D 2
Lafayette	C 7
Lawrence	H 1
Lee	I 4
Lincoln	G 5
Little River	B 6
Logan	C 3
Lonoke	G 4
Madison	C 1
Marion	E 1
Miller	C 7
Mississippi	J 2
Monroe	H 4
Montgomery	C 4
Nevada	D 6
Newton	D 2
Ouachita	E 6
Perry	E 4
Phillips	I 5
Pike	C 5
Poinsett	I 2
Polk	B 5
Pope	D 3
Prairie	H 4
Pulaski	F 4
Randolph	I 1
Saline	E 4
Scott	B 4
Searcy	E 2
Sebastian	B 3
Sevier	B 6
Sharp	H 1
St. Francis	I 3
Stone	F 2
Union	E 7
Van Buren	F 2
Washington	B 2
White	G 3
Woodruff	H 3
Yell	D 3

CHIEF CITIES.

Pop.—Thousands.

38	Little Rock	F 4
12	Fort Smith	B 3
11	Pine Bluff	G 5
10	Hot Springs	E 1
6	Helena	J 4
5	Texarkana	C 7
5	Jonesboro	I 2
4	Fayetteville	B 1
4	Eureka Springs	C 1
3	Mena	B 4
3	Paragould	I 1
3	Newport	H 2
3	Camden	E 6
3	Arkadelphia	D 5
3	Van Buren	B 3
2	Batesville	G 2
2	Rogers	B 1
2	Prescott	D 6
2	Conway	F 3
2	Searcy	G 3
2	Bentonville	B 1
2	Clarendon	H 4
2	Russellville	D 3
2	Siloam Springs	B 1
2	Fordyce	F 6
2	Marianna	I 4
2	Morrillton	E 3
2	Brinkley	H 4
2	Hope	D 6
2	Wynne	I 3
2	Magnolia	D 7
2	Dardanelle	D 3
2	Malvern	E 5
2	Monticello	G 6
2	Harrison	D 1

LOUISIANA

Land area, 45,420 sq. m.
Water area, 3,300 sq. m.
Pop. 1900, 1,381,625
Male 694,733
Female 686,892
Native 1,328,722
Foreign 52,903
White 729,612
African 650,804
Chinese 599
Japanese 17
Indian 593

COUNTIES.

Acadia . F 6
Ascension F 9
Assumption G 8
Avoyelles D 7
Bienville B 4
Bossier .... A 3
Caddo .... A 3
Calcasieu F 4
Caldwell .. B 6
Cameron . G 4
Catahoula C 7
Claiborne .. A 5
Concordia . D 7
De Soto . B 3
East Baton Rouge . E 8
East Carroll A 8
East Feliciana E 9
Franklin .... B 7
Grant ... C 5
Iberia ... G 7
Iberville ... F 8
Jackson ... B 5
Jefferson ... G 10
Lafayette .. F 6
Lafourche . G 10
Lincoln ... A 5
Livingston F 9
Madison B 8
Morehouse A 7
Natchitoches C 4
Orleans . F 11
Ouachita . B 6
Plaquemines G 11
Pointe Coupee E 7
Rapides ... D 6
Red River .. B 4
Richland B 7
Sabine ..... D 4
St. Bernard G 12
St. Charles G 10
St. Helena .. E 9
St. James . F 9
St. John the Baptist . F 10
St. Landry E 6
St. Martin .. F 7
St. Mary .... G 8
St. Tammany F 11
Tangipahoa . E 10
Tensas .. C 8
Terrebonne H 9
Union ...... A 6
Vermilion . G 6
Vernon ..... D 4
Washington E 10
Webster .... A 4
West Baton Rouge .. E 8
West Carroll A 8
West Feliciana E 8
Winn .... C 5

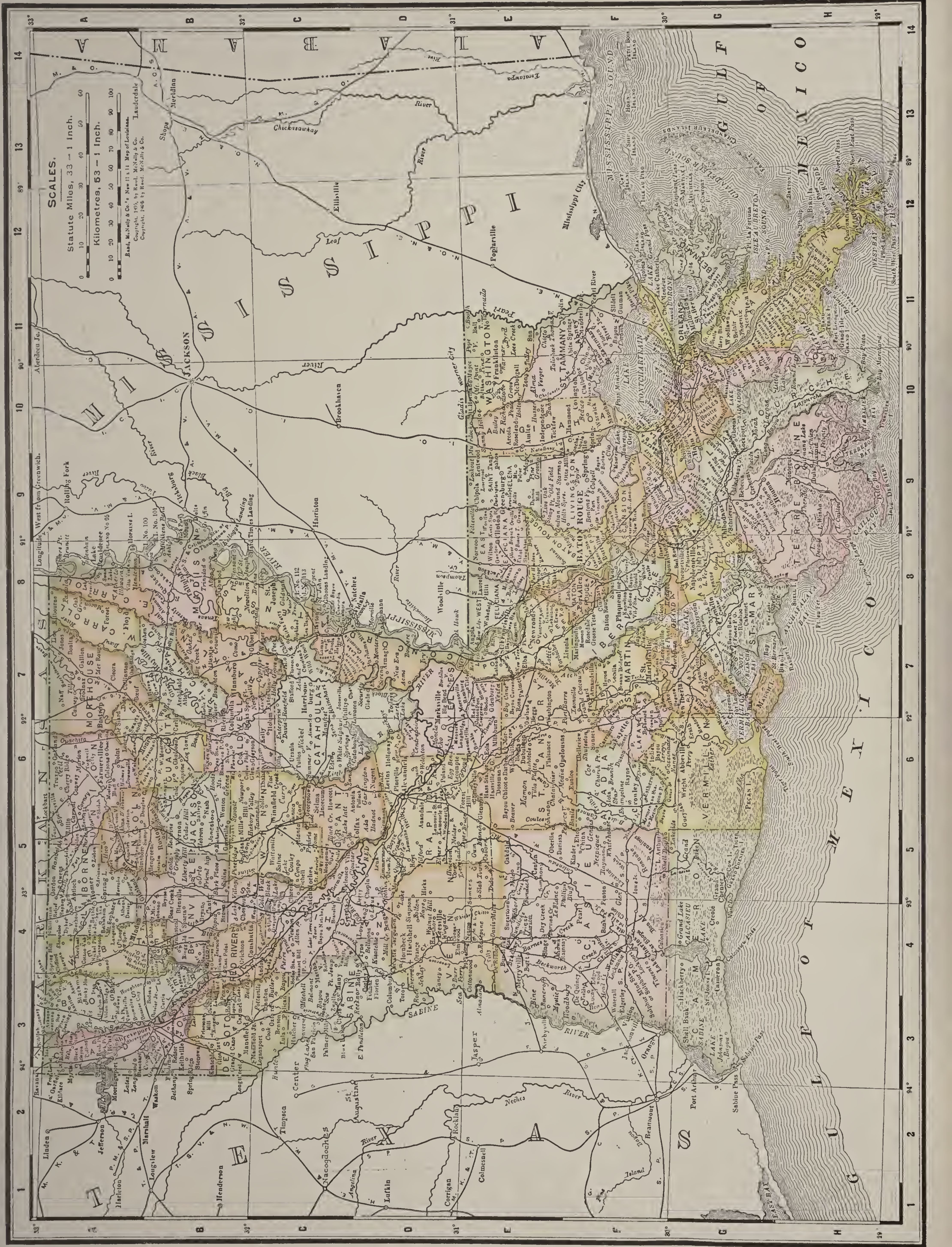
CHIEF CITIES.

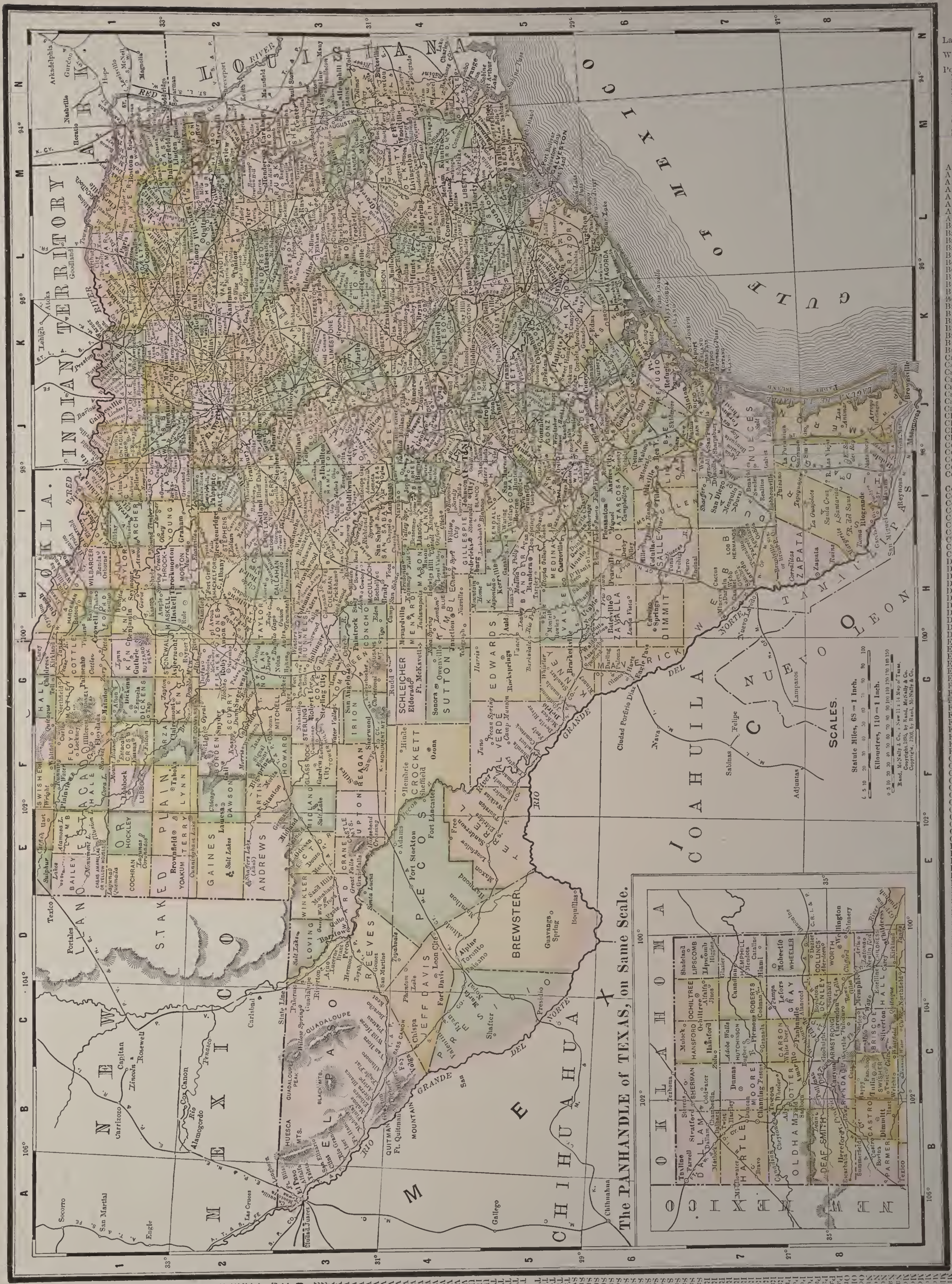
Pop.—Thousands.

287 New Orleans G 11
16 Shreveport A 3
11 Baton Rouge F 8
7 New Iberia G 7
7 Lake Charles F 4
6 Alexandria D 6
5 Monroe ... B 6
4 Crowley .. F 6
4 Donaldsonville . F 8
4 Plaquemine F 8
3 Gretna ... G 11
3 Lafayette . F 6
3 Thibodaux G 9
3 Houma ... G 9
3 Opelousas . E 6
3 Franklin . G 8
2 Patterson . G 8
2 Natchitoches C 5
2 Morgan City G 8
2 Jackson .. E 8
2 Vacherie .. G 9
2 St. Martinsville F 7
2 Jeanerette G 7
2 White Castle F 8
2 Minden ... A 4
2 Amite .. E 10
2 Jennings .. F 5
2 Abbeville . G 6
2 Hammond F 10
1 Westlake .. F 4
1 Ruston . B 5
1 Roseland .. E 10
1 Kentwood . E 9
1 Lake Providence . A 8
1 Kenner .. F 10
1 Covington F 10
1 Washington E 7
1 Homer .... A 4
1 Leesville .. D 4
1 Slidell ... F 11
1 St. Francisville E 7
1 Mandeville F 10
1 Vidalia .... C 8
1 Rayne ..... F 6
1 Lutcher .. F 9
1 Albemarle G 8
1 Clinton .. E 9

Pop.—Hundreds.

9 Napoleonville G 8
9 Arcadia .. A 5
9 Bunkie ..... E 6
8 Mansfield . B 3
8 Marksville . D 7
8 Boyce .... D 5
8 Bastrop .... A 7
8 Madisonville F 10
8 W. Monroe B 6
8 Newroads .. E 8





TEXAS

Land area, 262,290 sq. m.
Water area, 3,490 sq. m.
Pop. 1900, 3,048,710
Male 1,578,900
Female 1,469,810
Native 2,869,353
Foreign 179,357
White 2,426,669
African 620,722
Chinese .. 836
Japanese .. 13
Indian ..... [illegible]

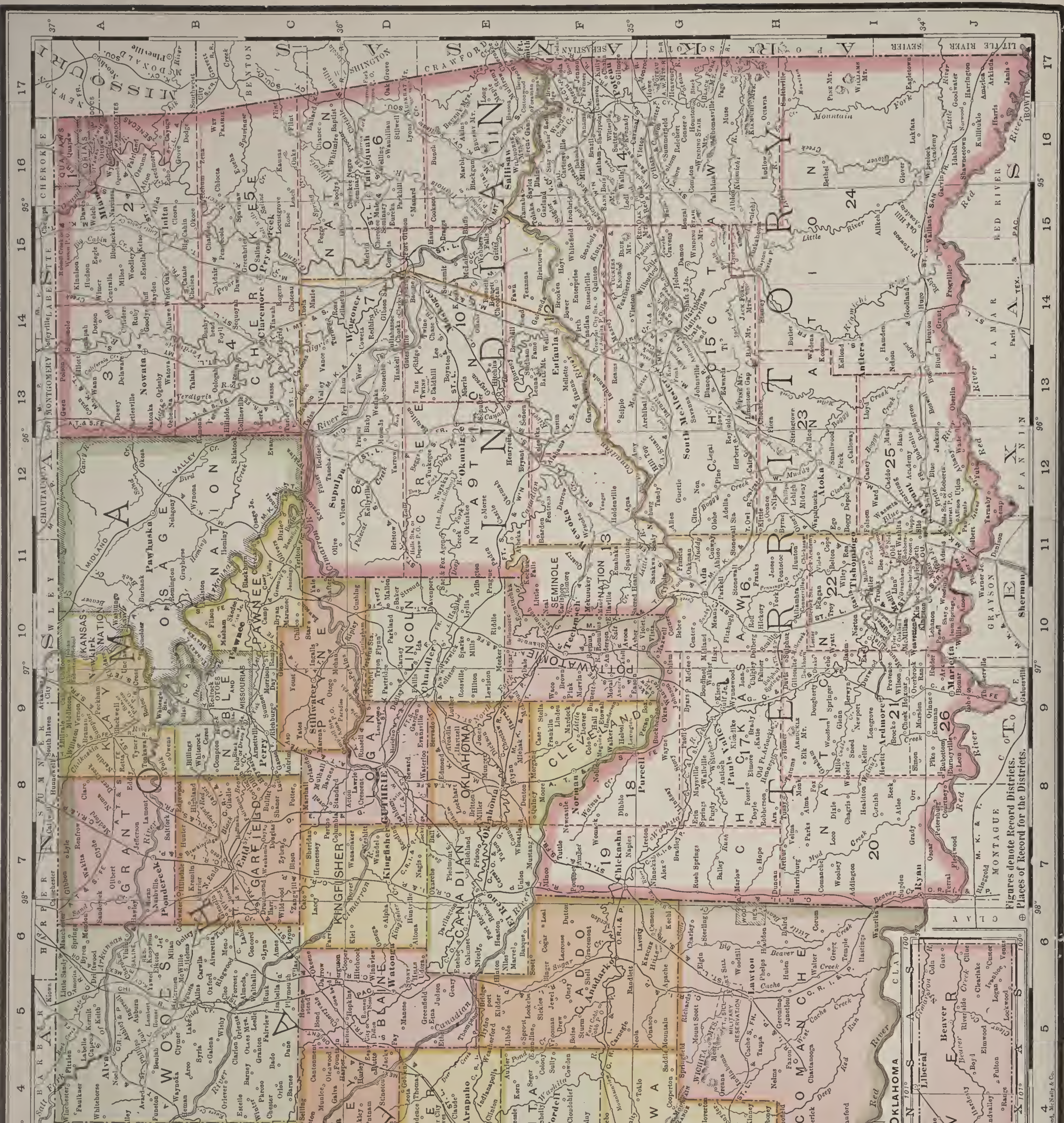
COUNTIES.

Anderson.... L 3
Andrews ..... E 2
Angelina ..... M 3
Aransas ...... K 6
Archer .... I 1
Armstrong ... C 8
Atascosa ..... I 6
Austin .... K 5
Bailey .... E 1
Bandera ...... H 5
Bastrop ...... J 4
Baylor .... H 1
Bee .... J 6
Bell .... J 3
Bexar .... I 5
Blanco .... I 4
Borden .... F 2
Bosque .... J 3
Bowie .... M 1
Brazoria ..... L 5
Brazos .... K 4
Brewster ..... D 5
Briscoe ...... C 8
Brown .... I 3
Burleson ..... K 4
Burnet .... I 4
Caldwell ..... J 5
Calhoun ...... K 6
Callahan ..... H 2
Cameron ...... J 8
Camp .... M 2
Carson .... C 7
Cass .... M 1
Castro .... B 8
Chambers .... M 5
Cherokee .... L 3
Childress .... D 8
Clay .... I 1
Cochran ..... E 1
Coke .... G 3
Coleman ..... H 3
Collin .... K 1
Collingsworth D 8
Colorado ..... K 5
Comal .... I 5
Comanche .... I 3
Concho ...... H 3
Cooke .... J 1
Coryell ...... J 3
Cottle .... G 1
Crane .... E 3
Crockett ..... F 4
Crosby .... F 1
Dallam ...... B 7
Dallas ...... K 2
Dawson ...... F 2
Deaf Smith .. B 8
Delta .... L 1
Denton .... J 1
Dewitt .... J 5
Dickens ...... G 1
Dimmit ...... H 6
Donley .... D 8
Duval .... I 7
Eastland ..... I 2
Ector .... E 3
Edwards .... G 4
Ellis .... K 2
El Paso ..... B 3
Erath .... I 2
Falls .... K 3
Fannin ...... K 1
Fayette ..... J 5
Fisher .... G 2
Floyd .... F 1
Foard .... H 1
Fort Bend ... L 5
Franklin .... L 1
Freestone .. K 3
Frio .... H 6
Gaines ...... E 2
Galveston ... M 5
Garza .... F 1
Gillespie ..... I 4
Glasscock .... F 3
Goliad .... J 6
Gonzales ..... J 5
Gray .... D 7
Grayson ..... K 1
Gregg .... M 2
Grimes ...... L 4
Guadalupe .... I 5
Hale .... F 1
Hall .... D 8
Hamilton ..... I 3
Hansford .... C 6
Hardeman ... H 1
Hardin .... M 4
Harris .... L 5
Harrison ..... M 2
Hartley ...... B 7
Haskell ..... H 1
Hays .... J 4
Hemphill .... D 7
Henderson ... L 2
Hidalgo ..... I 8
Hill .... J 3
Hockley ..... E 1
Hood .... J 2
Hopkins ..... L 1
Houston ..... L 3
Howard ...... F 2
Hunt .... K 2
Hutchinson . C 7
Irion .... G 3
Jack .... I 1
Jackson .... K 5
Jasper ..... N 4
Jeff Davis .... C 4
Jefferson ... M 5
Johnson ..... J 2
Jones .... H 2
Karnes ...... J 6
Kaufman .... K 2
Kendall ..... I 4
Kent .... G 1
Kerr .... H 4
Kimble ...... H 4
King .... G 1
Kinney ...... G 5
Knox .... H 1
Lamar ...... L 1
Lamb .... E 1
Lampasas .. I 3
Lasalle ..... H 6
Lavaca ..... K 5
Lee .... K 4
Leon .... K 3
Liberty ..... M 4
Limestone .. K 3
Lipscomb .. D 6
Live Oak ... I 6
Llano ...... I 4
Loving ..... D 3
Lubbock .... F 1
Lynn .... F 2
McCulloch H 3
McLennan .. J 3
McMullen .. I 6
Madison .... L 3
Marion ..... M 2
Martin ..... F 2
Mason ..... H 4
Matagorda .. K 6
Maverick .... G 6
Medina ...... H 5
Menard ...... H 4
Midland ...... E 3
Milam .... J 3
Mills .... I 3
Mitchell ..... G 2
Montague ... J 1
Montgomery L 4
Moore .... C 7
Morris .... M 1
Motley ...... G 1
Nacogdoches M 3
Navarro ..... K 3
Newton ...... N 4
Nolan .... G 2
Nueces ...... J 7
Ochiltree .... D 6
Oldham ..... B 8
Orange ...... N 4
Palo Pinto ... I 2
Panola .... M 2
Parker ...... J 2
Parmer ..... B 8
Pecos ...... E 4
Polk .... M 4
Potter .... C 7
Presidio ..... C 4
Rains .... L 2
Randall ..... C 8
Reagan ..... F 3
Red River .. M 1
Reeves ...... D 3
Refugio ...... J 6
Roberts ..... D 7
Robertson .. K 3
Rockwall .... K 2
Runnels ..... H 3
Rusk .... M 2
Sabine .... N 3
San Augustine M 3
San Jacinto .. L 4
San Patricio . J 6
San Saba ..... I 3
Schleicher .. G 4
Scurry .... G 2
Shackelford H 2
Shelby .... M 3
Sherman .... C 6
Smith .... L 2
Somervell .... J 2
Starr .... I 8
Stephens ..... I 2
Sterling ...... G 3
Stonewall ... G 2
Sutton ...... G 4
Swisher ...... C 8
Tarrant ...... J 2
Taylor ...... H 2
Terrell .... E 5
Terry .... E 1
Throckmorton .. H 2
Titus .... M 1
Tom Green .. F 3
Travis .... J 4
Trinity .... L 3
Tyler .... M 4
Upshur ...... M 2
Upton .... E 3
Uvalde ...... H 5
Valverde .... F 4
Van Zandt ... L 2
Victoria ..... K 6
Walker .... L 4
Waller ...... K 4
Ward .... D 3
Washington . K 4
Webb .... H 7
Wharton .... K 5
Wheeler ..... D 7
Wichita ...... I 1
Wilbarger ... H 1
Williamson .. J 4
Wilson .... I 5
Winkler ...... E 3
Wise .... J 1
Wood .... L 2
Yoakum ..... E 1
Young .... I 1
Zapata .... H 7
Zavalla ...... H 6

CHIEF CITIES.

Pop.—Thousands.

53 San Antonio I 5
45 Houston .. L 5
43 Dallas ..... K 2
38 Galveston M 5
27 Ft. Worth . J 2
22 Austin .... J 4
21 Waco ...... J 3
16 El Paso ... A 3
13 Laredo .... H 7
12 Denison .. K 1
10 Sherman .. K 1
9 Beaumont . M 5
9 Paris ...... L 1
9 Corsicana . K 2
8 Palestine ... L 3
8 Tyler ...... L 2
8 Gainesville . J 1
8 Marshall ... M 2
7 Cleburne ... J
7 Temple .... J 3
7 Greenville . L 1
6 Terrell ..... K 2
6 Brownsville J 8
6 Brenham .. K 4
5 Hillsboro ... J 3
5 Texarkana M 1
5 Bonham ... K 1
5 Ennis ...... K 2
5 Weatherford J 2
5 Corpus Christi J 7



IND. TER.

Land area, 31,000 sq.m.
Water area, 400 sq. m.
Pop. 1900..392,060
Male....208,952
Female.183,108
Native .387,202
Foreign...4,858
White..302,680
African .36,853
Chinese......27
Indian...52,500

DISTRICTS.

First	A 16
Second	A 15
Third	A 13
Fourth	B 13
Fifth	C 16
Sixth	D 16
Seventh	D 14
Eighth	D 12
Ninth	E 12
Tenth	E 14
Eleventh	E 16
Twelfth	F 14
Thirteenth	F 11
Fourteenth	F 16
Fifteenth	G 14
Sixteenth	H 11
Seventeenth	H 9
Eighteenth	F 8
Nineteenth	F 7
Twentieth	I 7
Twenty-first	I 9
Twenty-second	I 11
Twenty-third	H 13
Twenty-fourth	I 15
Twenty-fifth	I 12
Twenty-sixth	J 9

CHIEF CITIES.

Pop.—Thousands.

8	Ardmore	I 9
6	South McAlester	G 13
5	Durant	J 11
4	Muskogee	D 14
4	Tulsa	C 13
4	Wagoner	D 14
3	Okmulgee	E 13
3	Tahlequah	D 16
3	Duncan	H 7
3	Chickasha	F 7
3	Vinita	B 15
3	Holdenville	F 11
3	Wilburton	G 15
3	Miami	A 16
3	Coalgate	H 12
2	Hartshorne	G 14
2	Lehigh	H 12
2	Krebs	G 13
2	Purcell	F 8
2	Sapulpa	D 12
2	Comanche	H 7
2	Wynnewood	H 9
2	Eufaula	F 14
2	Claremore	C 14
2	Sulphur	H 10
1	Pauls Valley	G 9
1	Checotah	E 15
1	Ada	G 10
1	Davis	H 9
1	Poteau	F 17
1	Pryorcreek	C 15
1	Roff	H 10
1	Ryan	I 7
1	Howe	G 17
1	Stilwell	D 17
1	Afton	A 16
1	Hugo	J 14
1	Caddo	I 12
1	Antlers	I 14
1	McAlester	G 13
1	Tishomingo	I 11
1	Rush Springs	G 7
1	Sallisaw	E 16
1	Wetumka	F 12
1	Atoka	H 12
1	Bartlesville	A 13
1	Madill	I 10
1	Millcreek	H 10
1	Marlow	H 7
1	Mounds	D 12
1	Anderson	G 13

OKLAHOMA

Land area, 38,830 sq. m.
Water area, 200 sq. m.
Pop. 1900..398,331
Male....214,359
Female.183,972
Native..382,651
Foreign.15,680
White..367,524
African..18,831
Chinese......31
Indian...11,945

COUNTIES.

Beaver	J 3
Blaine	D 5
Caddo	F 5
Canadian	E 6
Cleveland	F 8
Comanche	H 5
Custer	D 3
Day	D 2
Dewey	D 3
Garfield	B 7
Grant	A 7
Greer	G 1
Kay	A 9
Kingfisher	D 7
Kiowa	G 3
Lincoln	D 10
Logan	D 8
Noble	B 9
Oklahoma	E 8
Pawnee	C 10
Payne	C 9
Pottawatomie	F 10
Roger Mills	E 1
Washita	E 3
Woods	B 5
Woodward	B 2

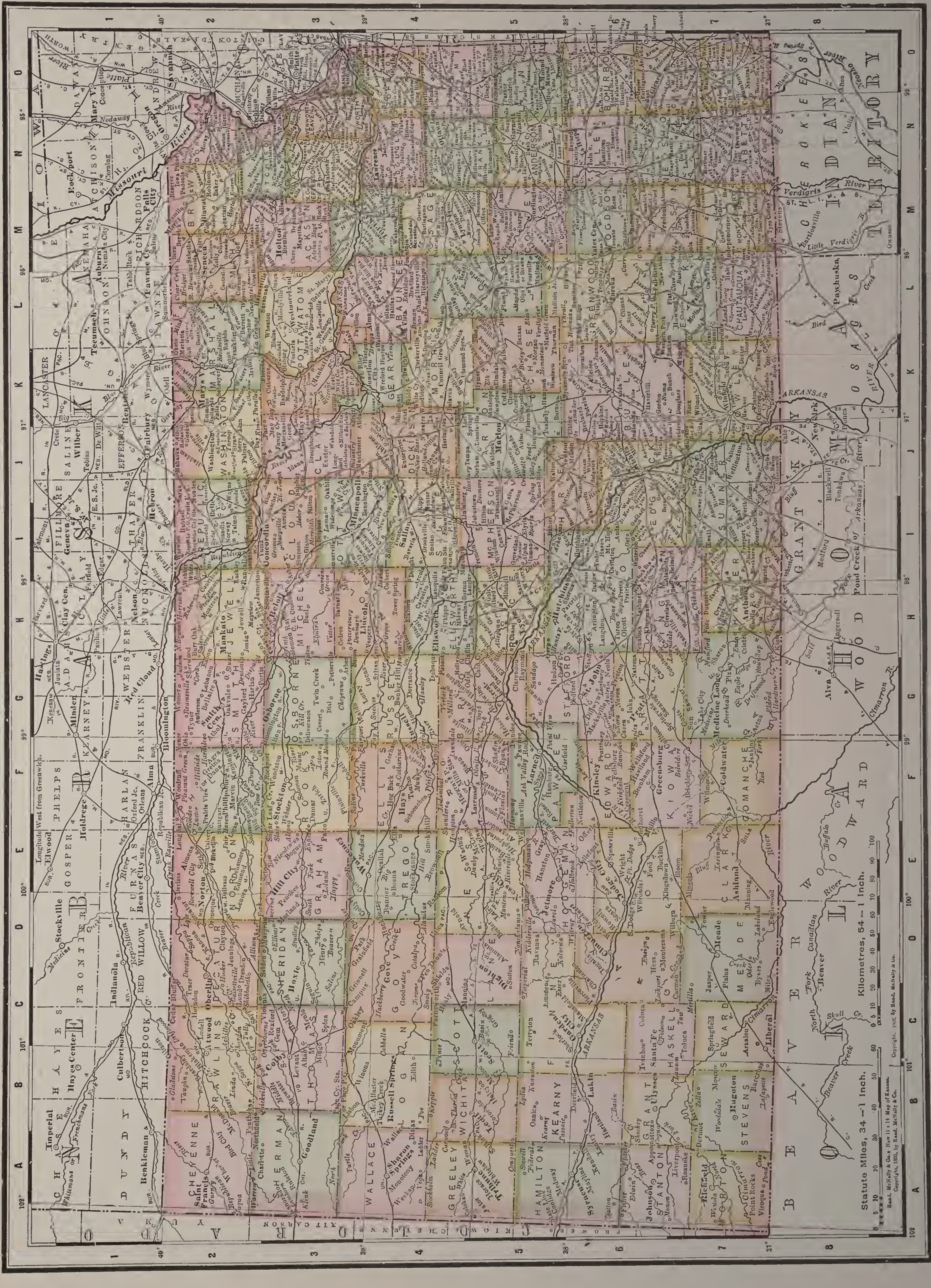
INDIAN RESERVATIONS.

Kaw (Kansas Nation)	A 10
Osage	B 11
Wichita	D 6

CHIEF CITIES.

Pop.—Thousands.

22	Oklahoma	E 8
13	Guthrie	D 8
11	Shawnee	E 10
10	Enid	B 7
9	Lawton	H 5
8	Elreno	E 7
5	Stillwater	C 9
4	Norman	F 8
4	Anadarka	F 6
4	Kingfisher	D 7
3	Perry	C 9
3	Pawnee	B 10
3	Alva	A 4
3	Ponca	A 9
3	Fort Sill	H 6
2	Geary	E 6
2	Blackwell	A 9
2	Tecumseh	F 10
2	Newkirk	A 9
2	Hobart	G 3
2	Cordell	F 4
2	Mangum	G 2
1	Chandler	D 10
1	Hennessey	C 7
1	Bridgeport	E 5
1	Mountain-view	F 4
1	Cushing	D 10
1	Apache	G 6
1	Watonga	D 5
1	Woodward	B 2
1	Okeene	C 6
1	Leger	H 3
1	Weatherford	E 4
1	Clinton	E 8
1	Edmond	E 8



KANSAS

Land area, 81,700 sq. m.
Water area, 380 sq. m.

Pop. 1900, 1,470,495
Male 768,716
Female . 701,779
Native 1,343,810
Foreign . 126,685
White . 1,416,319
African . 52,003
Chinese . 39
Japanese . 4
Indian 2,130

COUNTIES.

Allen .... N 6
Anderson .... N 5
Atchison .... N 2
Barber .... G 7
Barton .... G 4
Bourbon .... O 6
Brown .... M 2
Butler ..... K 6
Chase .... K 5
Chautauqua .. L 7
Cherokee .... O 7
Cheyenne .... A 2
Clark .... E 7
Clay .... J 3
Cloud .... I 3
Coffey .... M 5
Comanche .. F 7
Cowley .... K 7
Crawford .... O 6
Decatur .... D 2
Dickinson .... J 4
Doniphan .... N 2
Douglas ..... N 4
Edwards ..... F 6
Elk .... L 7
Ellis .... F 4
Ellsworth ... H 4
Finney ...... C 5
Ford .... E 6
Franklin .... N 5
Geary .... K 4
Gove .... C 4
Graham ...... E 3
Grant .... B 6
Gray ...... D 6
Greeley .. A 4
Greenwood L 6
Hamilton ... A 5
Harper ...... H 7
Harvey ...... J 5
Haskell .... C 6
Hodgeman ... E 5
Jackson .... M 3
Jefferson .... N 3
Jewell .... H 2
Johnson 4
Kearney ..... B 5
Kingman .... H 6
Kiowa .... F 6
Labette ...... N 7
Lane .... D 5
Leavenworth N 3
Lincoln ...... H 3
Linn .... O 5
Logan ...... B 4
Lyon ...... L 5
McPherson ... I 5
Marion ...... J 5
Marshall ..... K 2
Meade ...... D 7
Miami ...... O 4
Mitchell ..... H 3
Montgomery M 7
Morris .... K 4
Morton ...... A 7
Nemaha ...... L 2
Neosho ...... N 6
Ness .... E 4
Norton .... E 2
Osage .... M 4
Osborne ..... G 3
Ottawa ...... I 3
Pawnee ...... F 5
Phillips ... F 2
Pottawatomie L 3
Pratt .... G 6
Rawlins ...... B 2
Reno .... H 6
Republic ...... I 2
Rice .... H 5
Riley .... K 3
Rooks .... F 3
Rush .... F 4
Russell ...... G 4
Saline .... I 4
Scott .... C 4
Sedgwick ..... I 6
Seward .... C 7
Shawnee ..... M 3
Sheridan ..... D 3
Sherman ..... A 3
Smith .... G 2
Stafford ..... G 5
Stanton ...... A 6
Stevens ...... B 7
Sumner ...... J 7
Thomas ...... B 3
Trego .... E 4
Wabaunsee .. L 4
Wallace .... A 4
Washington .. J 2
Wichita ...... B 4
Wilson ... M 7
Woodson ... M 6
Wyandotte .. O 3

CHIEF CITIES.

Pop. — Thousands.

51 Kansas City O 3
34 Topeka ... M 4
25 Wichita ... J 6
21 Leavenworth N 3
16 Atchison N 2
11 Lawrence N 4
10 Fort Scott O 6
10 Galena ... O 7
10 Pittsburg . O 7
9 Hutchinson H 5
8 Emporia ... L 5
8 Parsons ... N 7
7 Ottawa .... N 4
6 Newton .... J 6
6 Arkansas City J 7
6 Salina ..... I 4
6 Argentine .. O 3
6 Winfield ... K 7
6 Iola ..... N 6
5 Coffeyville M 7
5 Independence M 7
5 Junction City K 4
4 Wellington . J 7
4 Chanute ... M 6
4 Osawatomie N 5
4 Abilene .... J 4
3 Cherryvale M 7
3 El Dorado . K 6
3 Olathe ..... O 4
3 Manhattan . K 3
3 Concordia .. I 3
3 Horton .. .M 2
3 Rosedale .. O 3
3 Paola ... O 4
3 Holton ... M 3

NEBRASKA

Land area,	76,840 sq. m.
Water area,	670 sq. m.
Pop. 1900	1,066,300
Male	564,592
Female	501,708
Native	888,953
Foreign	177,317
White	1,056,526
African	6,269
Chinese	180
Japanese	8
Indian	3,322

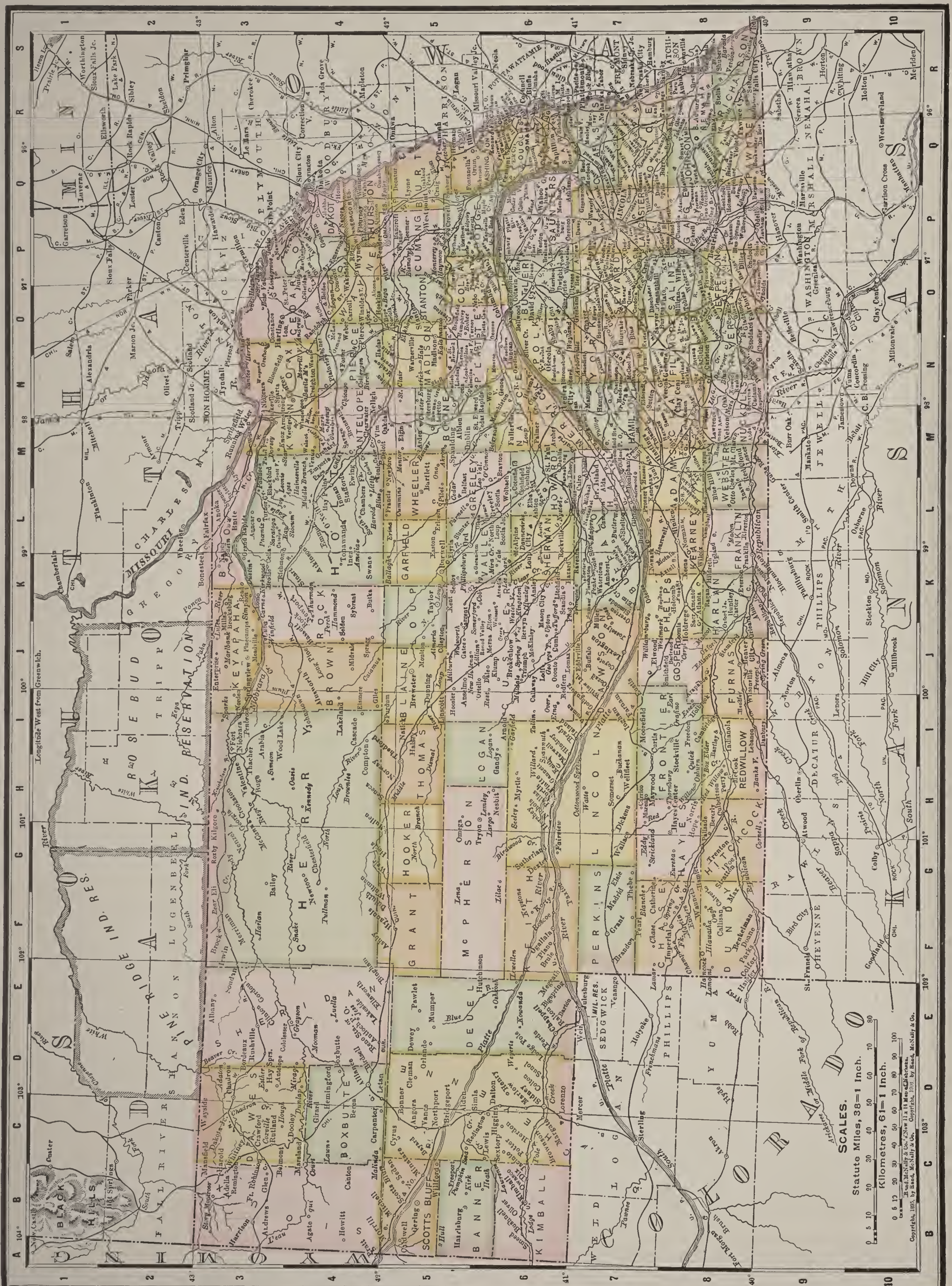
COUNTIES.

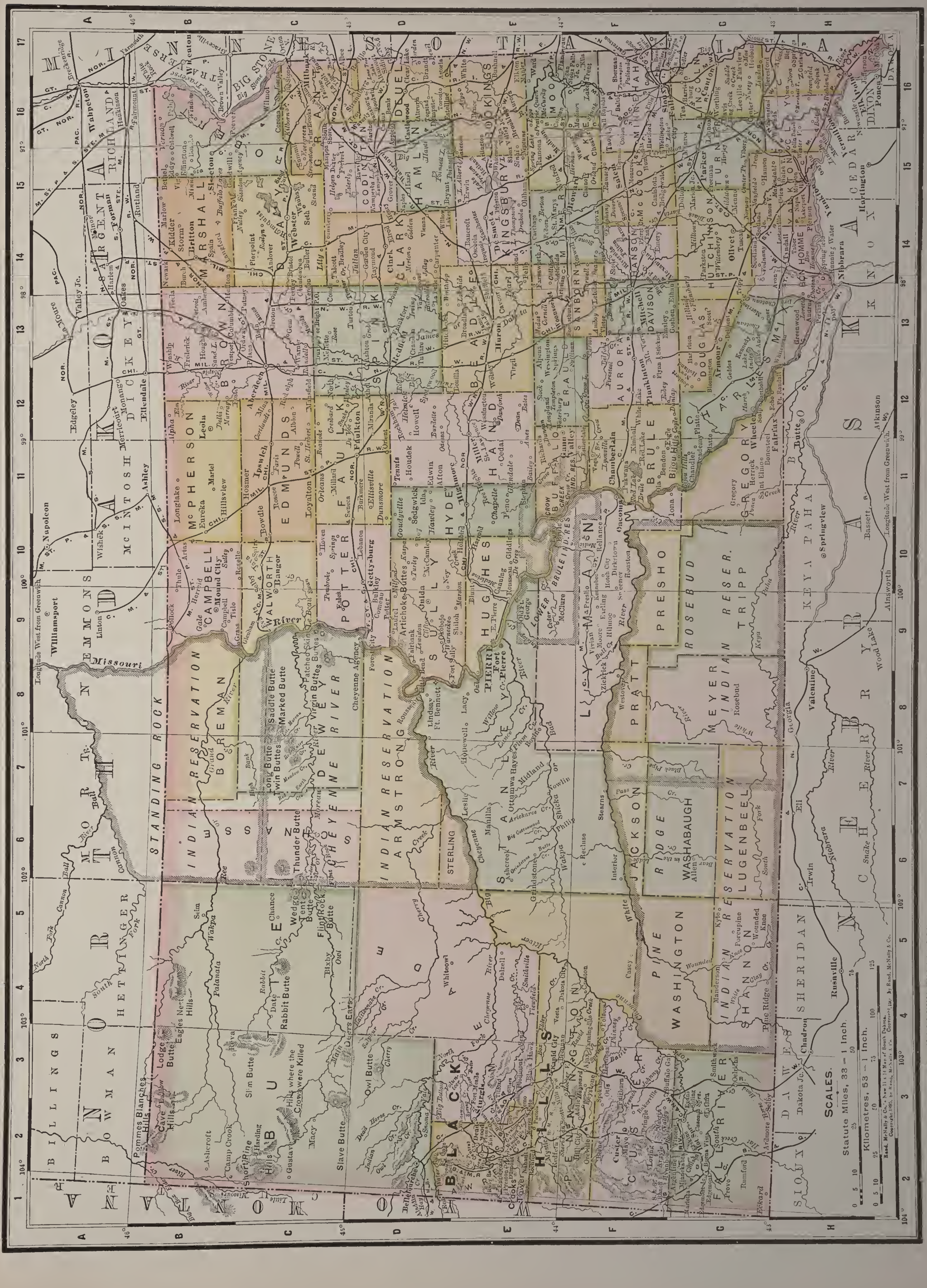
Adams ... M 8
Antelope ... M 4
Banner ... B 6
Blaine ... J 5
Boone ... M 5
Boxbutte ... C 4
Boyd ... L 3
Brown ... J 4
Buffalo ... K 7
Burt ... Q 5
Butler ... O 6
Cass ... Q 7
Cedar ... O 3
Chase ... F 7
Cherry ... G 4
Cheyenne ... C 6
Clay ... N 8
Colfax ... O 5
Cuming ... P 5
Custer ... J 6
Dakota ... P 4
Dawes ... C 3
Dawson ... J 7
Deuel ... E 5
Dixon ... P 4
Dodge ... P 5
Douglas ... Q 6
Dundy ... F 8
Fillmore ... N 8
Franklin ... L 8
Frontier ... I 7
Furnas ... J 8
Gage ... P 8
Garfield ... L 5
Gosper ... J 8
Grant ... F 5
Greeley ... L 5
Hall ... L 7
Hamilton ... M 7
Harlan ... K 8
Hayes ... G 8
Hitchcock ... G 8
Holt ... L 4
Hooker ... G 5
Howard ... L 6
Jefferson ... O 8
Johnson ... Q 8
Kearney ... L 7
Keith ... F 6
Keyapaha ... J 3
Kimball ... B 6
Knox ... N 3
Lancaster ... P 7
Lincoln ... H 7
Logan ... I 5
Loup ... K 5
McPherson ... G 5
Madison ... N 5
Merrick ... M 6
Nance ... N 6
Nemaha ... R 8
Nuckolls ... M 8
Otoe ... Q 7
Pawnee ... Q 8
Perkins ... F 7
Phelps ... K 7
Pierce ... N 4
Platte ... N 5
Polk ... N 6
Redwillow ... I 8
Richardson ... R 8
Rock ... K 4
Saline ... O 7
Sarpy ... Q 6
Saunders ... P 6
Scotts Bluff ... B 5
Seward ... O 7
Sheridan ... E 3
Sherman ... K 6
Sioux ... B 4
Stanton ... O 5
Thayer ... N 8
Thomas ... H 5
Thurston ... P 4
Valley ... L 5
Washington ... Q 6
Wayne ... O 4
Webster ... L 8
Wheeler ... L 5
York ... N 7

CHIEF CITIES.

Pop. – Thousands.

103 Omaha ... R 6
40 Lincoln ... P 7
26 South Omaha ... R 6
8 Beatrice ... P 8
8 Grand Island ... M 7
7 Nebraska City ... R 7
7 Fremont ... Q 6
7 Hastings ... M 7
6 Kearney ... L 7
5 York ... N 7
5 Plattsmouth ... R 7
4 Norfolk ... O 4
4 North Platte ... H 6
4 Columbus ... O 6
3 Fairbury ... O 8
3 Falls City ... R 8
3 Holdredge ... K 8
3 Blair ... Q 5
3 Auburn ... R 8
3 Wymore ... P 8
3 Alliance ... D 4





SOUTH DAKOTA

Land area, 76,850 sq. m.
Water area, 800 sq. m.
Pop. 1900 . 401,570
Male 216,164
Female 185,406
Native ..313,062
Foreign . 88,508
White...380,714
African ... 465
Chinese.... 165
Indian .. 20,225

COUNTIES.

Armstrong .D 7
Aurora......F 12
Beadle ......E 13
Bonhomme .H 14
Boreman....B 7
Brookings ..E 16
Brown ......B 13
Brule........F 11
Buffalo......E 11
Butte ....C 3
Campbell ...B 9
Charles Mix.G 12
Clark .... D 14
Clay.........H 16
Codington ..D 15
Custer ......F 2
Davison .... F 13
Day .... C 14
Deuel ....D 16
Dewey ......C 8
Douglas.....G 13
Edmunds ...C 11
Fall River ..G 2
Faulk ....C 11
Grant ....C 16
Gregory ....G 11
Hamlin .....D 15
Hand ....E 11
Hanson .....F 14
Hughes .....E 9
Hutchinson G 14
Hyde........D 11
Jackson.....F 6
Jerauld .....E 12
Kingsbury ..E 15
Lake ....F 15
Lawrence...E 2
Lincoln .....G 16
Lugenbeel..G 8
Lyman ......F 9
McCook.....F 15
McPherson .B 11
Marshall ....B 14
Meade ......E 4
Meyer.......G 8
Miner ....E 14
Minnehaha .F 16
Moody ......E 16
Pennington F 3
Potter .. ...C 10
Pratt ....F 8
Presho ......F 10
Roberts .... B 16
Sanborn .... F 13
Schnasse ....C 6
Shannon ....G 4
Spink ....D 13
Stanley......E 7
Sterling.....D 6
Sully ....D 9
Tripp ....G 9
Turner......G 15
Union ......H 16
Walworth...C 9
Washabaugh G 6
Washington G 5
Yankton....H 15

CHIEF CITIES.

Pop. Thousands.
12 Sioux Falls F 16
8 Lead....... E 2
6 Aberdeen. C 12
6 Mitchell.. F 13
5 Watertown D 15
4 Deadwood. E 2
4 Yankton . H 15
4 Huron..... E 13
3 Brookings E 16
3 Madison.. E 16
3 Pierre ..... E 9
2 Canton ... G 16
2 Vermillion H 16
2 Hot Springs G 2
2 Webster...C 14
2 Rapid City.E 3
2 Milbank...C 16
2 Redfield . D 13
1 Flandreau F 16
1 Sisseton ...B 15
1 Dell Rapids F 16
1 Sturgis ....E 3
1 Elkpoint..H 16
1 Parker.. G 15
1 Beresford.G 16
1 Tyndall...H 14
1 Spearfish.. D 2
1 Armour...G 13
1 Scotland ..G 14
1 Groton....C 13
1 Bellefourche D 2
1 Chamberlain F 11
1 Clark ..... D 14
1 Desmet... E 14

NORTH DAKOTA

Land area, 70,195 sq. m.
Water area, 600 sq. m.
Pop. 1900..319,146
Male.... 177,493
Female .141,653
Native ..206,055
Foreign.113,091
White...311,712
African.....286
Chinese 32
Japanese ...148
Indian 6,968

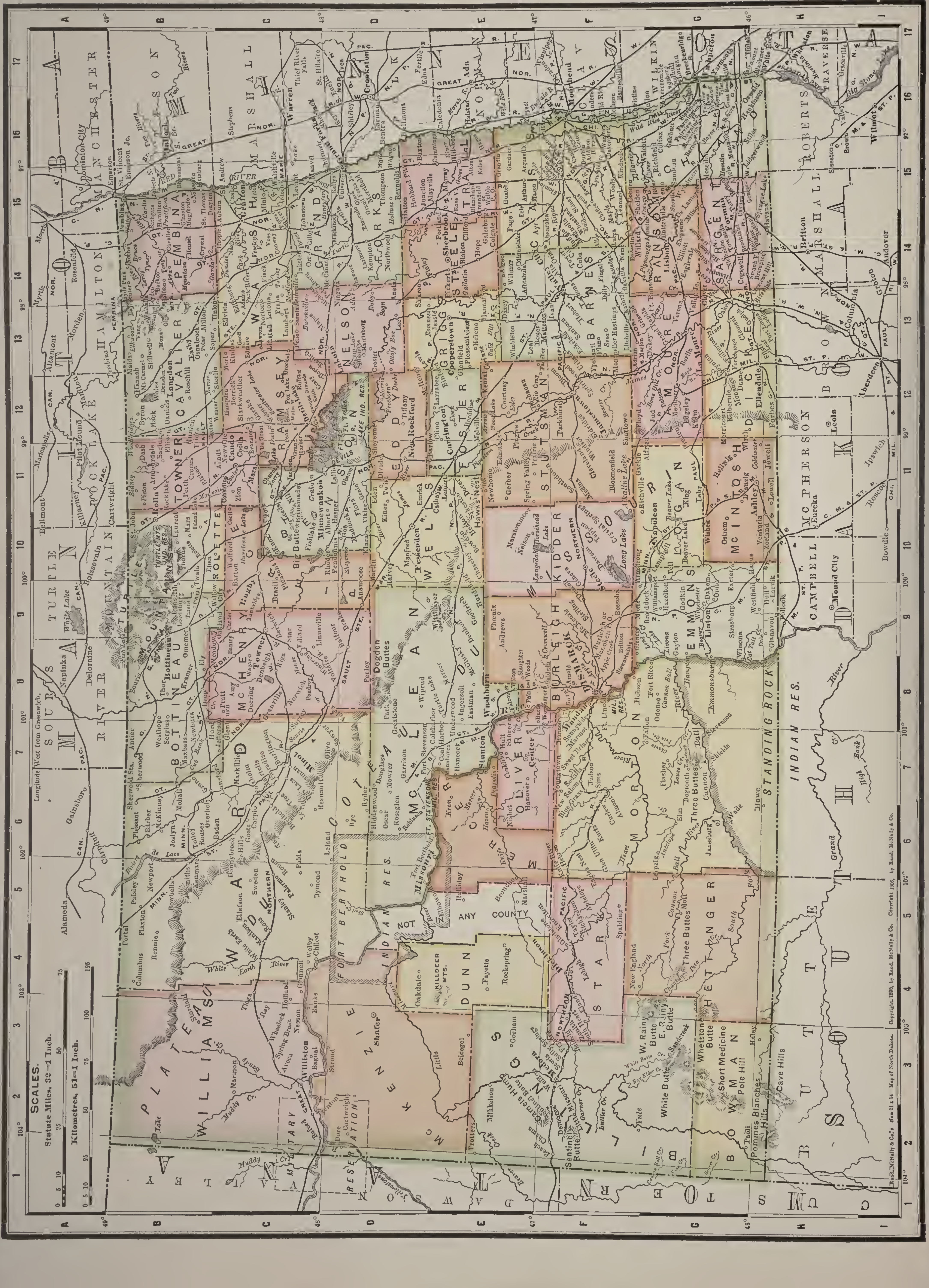
COUNTIES.

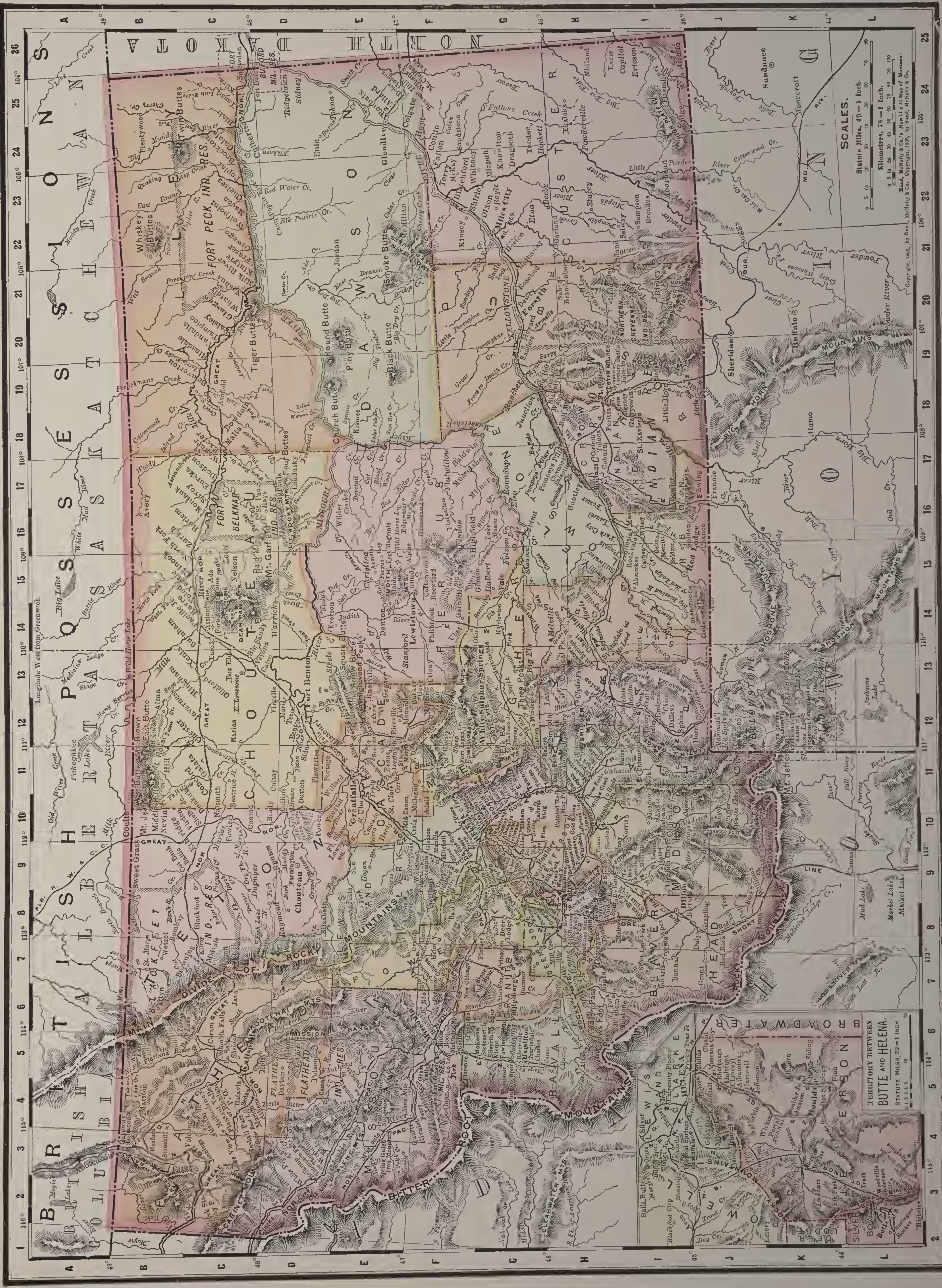
Barnes	F 13
Benson	D 11
Billings	F 2
Bottineau	B 8
Bowman	G 2
Burleigh	F 8
Cass	E 15
Cavalier	B 12
Dickey	G 12
Dunn	E 4
Eddy	D 12
Emmons	G 9
Foster	E 12
Grand Forks	C 14
Griggs	E 13
Hettinger	G 4
Kidder	F 10
Lamoure	G 12
Logan	G 10
McHenry	C 8
McIntosh	G 10
McKenzie	D 2
McLean	D 8
Mercer	E 6
Morton	F 7
Nelson	D 13
Oliver	E 7
Pembina	B 14
Pierce	C 9
Ramsey	C 12
Ransom	G 14
Richland	G 15
Rolette	B 10
Sargent	G 14
Stark	F 4
Steele	E 14
Stutsman	E 11
Towner	B 11
Traill	E 15
Walsh	C 14
Ward	C 6
Wells	D 10
Williams	B 2

CHIEF CITIES.

Pop.—Thousands.

10	Fargo	F 16
8	Grand Forks	D 15
3	Bismarck	F 8
3	Jamestown	F 12
2	Valley City	F 14
2	Grafton	C 15
2	Wahpeton	G 16
2	Dickinson	F 4
2	Devils Lake	C 12
2	Mandan	F 8
1	Minot	C 7
1	Larimore	D 14
1	Casselton	F 15
1	Langdon	B 13
1	Hillsboro	E 16
1	Mayville	E 15
1	Park River	C 14
1	Cando	C 11
1	Lisbon	G 14





MONTANA

Land area, 145,310 sq. m.
Water area, 770 sq. m.
Pop. 1900..243,329
Male 149,842
Female ..93,487
Native ..176,262
Foreign..67,067
White...226,283
African .. 1,523
Chinese .. 1,739
Japanese . 2,441
Indian ...11,343

COUNTIES.

Beaverhead	I 7
Broadwater	G 10
Carbon	I 15
Cascade	E 11
Chouteau	C 14
Crow Reservation	H 18
Custer	G 23
Dawson	E 22
Deerlodge	G 8
Fergus	F 15
Flathead	C 5
Gallatin	I 11
Granite	G 7
Jefferson	G 10
Lewis and Clarke	E 9
Madison	I 10
Meagher	F 11
Missoula	E 4
Park	H 12
Powell	E 7
Ravalli	G 5
Rosebud	G 19
Silverbow	H 8
Sweet Grass	H 14
Teton	C 3
Valley	B 21
Yellowstone	H 16

CHIEF CITIES.

Pop.—Thousands.

30	Butte	H 9
15	Great Falls	E 11
11	Helena	F 10
9	Anaconda	G 7
4	Missoula	F 6
3	Bozeman	H 12
3	Billings	H 17
3	Livingston	H 13
3	Walkerville	H 8
3	Kalispell	C 5
2	Red Lodge	J 15
2	Belt	E 12
2	Miles City	G 22
2	Dillon	I 8
1	Marysville	F 9
1	Deerlodge	G 8
1	Hamilton	G 5
1	Glendive	E 24
1	Lewistown	E 11
1	Havre	B 14
1	Fort Benton	D 13
1	Sandcoulee	E 11
1	Philipsburg	G 7

Pop.—Hundreds.

9	Boulder	G 10
8	Neihart	F 12
8	Bigtimber	H 14
7	East Helena	F 10
6	Columbia Falls	C 5
6	Basin	G 9
6	Whitehall	H 9
6	Sheridan	I 9
6	Virginia City	I 9
5	Twin Bridges	H 9
5	Clancey	F 10
5	Stockett	E 12
5	Glasgow	C 20
4	Townsend	G 11
4	White Sulphur Springs	F 12
4	Pony	H 10
4	Chouteau	D 12
3	Stevensville	F 5
3	Chinook	B 15
3	Granite	G 7
3	Bonner	F 6
3	Dupuyer	C 9
3	Gebo	I 15
3	Thompson	D 3
2	Lima	J 8
2	Horr	I 12
2	Augusta	E 8
2	Chestnut	H 12
1	Victor	G 5

IDAHO

Land area, 84,290 sq. m.
Water area, 510 sq. m.
Pop. 1900 .. 161,772
Male ... 93,367
Female .. 68,405
Native . 137,168
Foreign . 24,604
White .. 154,495
African ... 293
Chinese ... 1,467
Japanese. 1,291
Indian 4,226

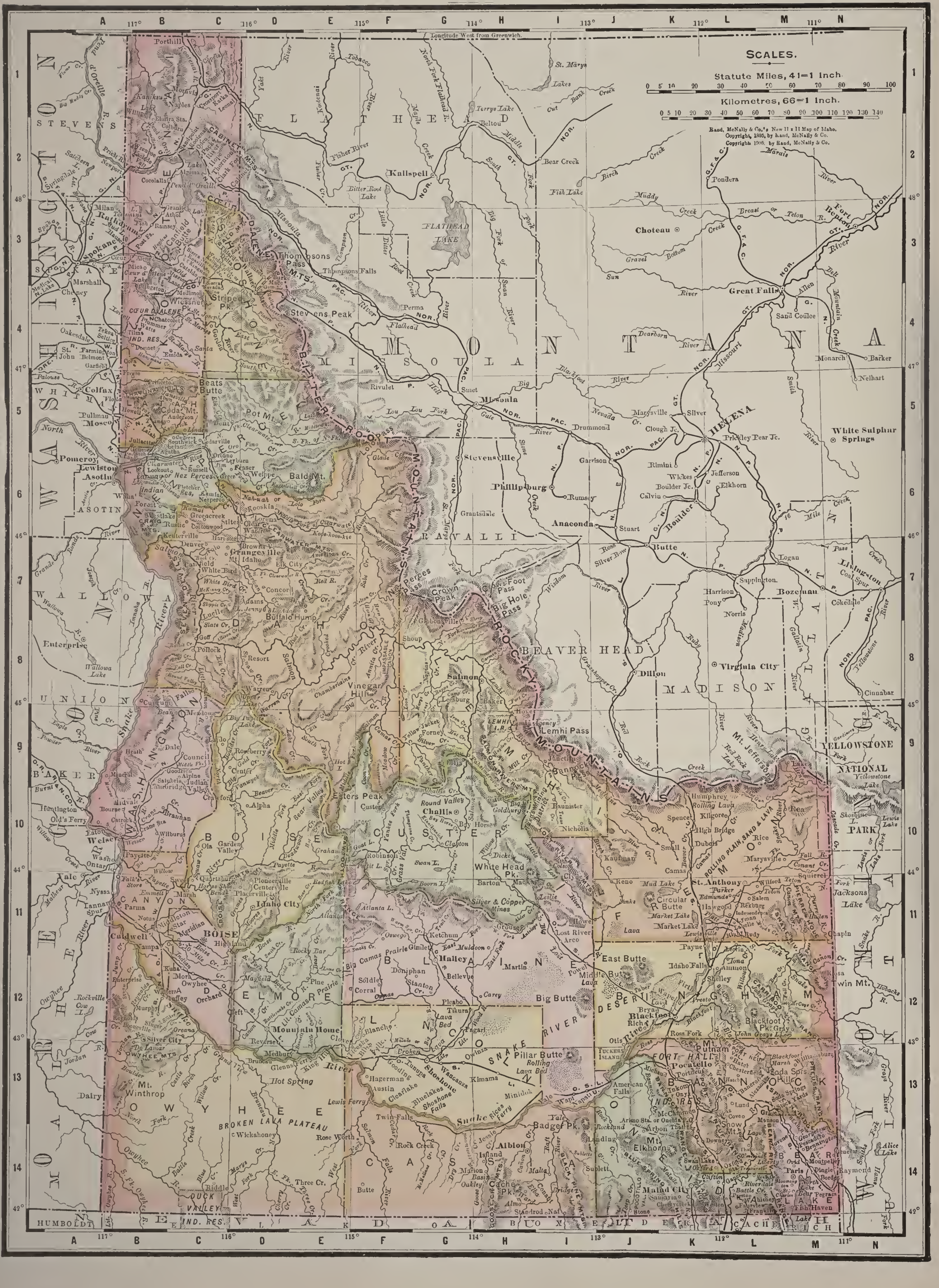
COUNTIES.

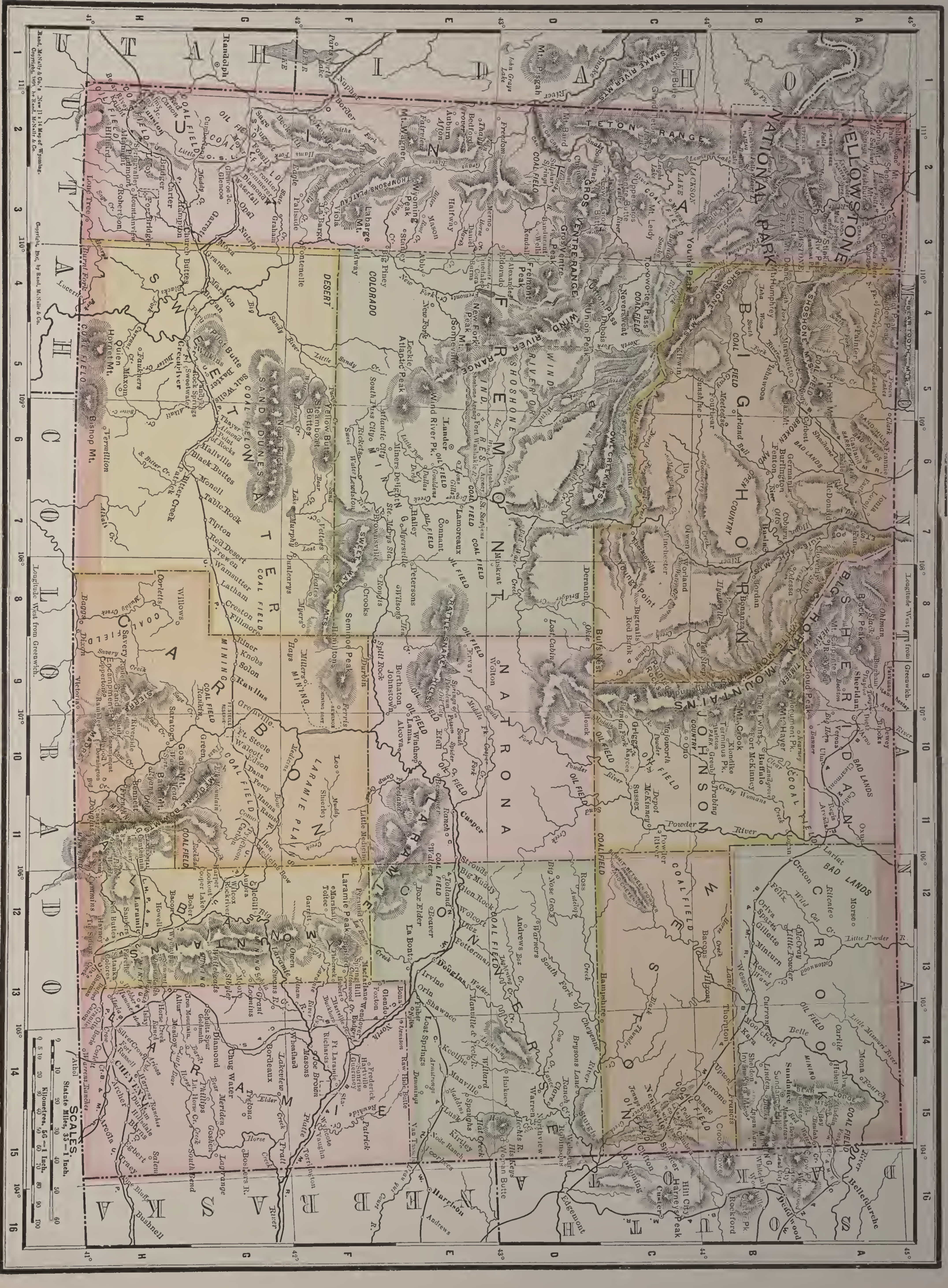
Ada	C 12
Bannock	L 13
Bear Lake	M 11
Bingham	L 12
Blaine	H 12
Boise	D 10
Canyon	B 11
Cassia	G 14
Custer	G 10
Elmore	D 12
Fremont	K 11
Idaho	D 8
Kootenai	B 3
Latah	B 5
Lemhi	H 9
Lincoln	G 13
Nez Perce	B 6
Oneida	K 11
Owyhee	C 13
Shoshone	D 4
Washington	B 9

CHIEF CITIES.

Pop.—Thousands.

6	Boise	C 11
4	Pocatello	K 13
2	Lewiston	A 6
2	Moscow	A 5
2	Wallace	D 3
2	Wardner	C 3
1	Montpelier	M 14
1	Weiser	A 10
1	Idaho Falls	K 12
1	Hailey	G 11
1	Grangeville	D 7
1	Rexburg	L 11
1	Malad City	K 14
1	Blackfoot	K 12
1	Oakley	H 14
1	Preston	L 14
1	Caldwell	B 11
1	Paris	M 14





WYOMING

Land area, 97,575 sq. m.
Water area, 315 sq. m.
Pop. 1900...92,531
Male......58,184
Female...34,347
Native...75,116
Foreign..17,415
White....89,051
African......940
Chinese......461
Japanese....363
Indian.....1,686

COUNTIES.

Albany	G 12
Bighorn	B 6
Carbon	G 10
Converse	D 13
Crook	A 13
Fremont	D 6
Johnson	B 10
Laramie	G 14
Natrona	D 10
Sheridan	A 9
Sweetwater	G 6
Uinta	E 2
Weston	C 13
Yellowstone Nat'l Park	B 2

CHIEF CITIES.

Pop.—Thousands.

14	Cheyenne	H 14
8	Laramie	H 12
4	Rock Springs	G 5
2	Rawlins	G 5
2	Evanston	H 2
2	Sheridan	A 9
1	Green River	H 5

Pop.—Hundreds.

9	Casper	E 11
8	Kemmerer	G 2
8	Newcastle	C 15
7	Lander	E 6
7	Cambria	C 15
7	Douglas	E 13
7	Buffalo	B 10
7	Saratoga	H 10
6	Carbon	G 11
6	Encampment	H 10
5	Basin	B 7
4	Afton	E 2
3	Wheatland	F 14
3	Thermopolis	C 7
3	Glenrock	E 12
3	Sundance	B 15
2	Almy	H 2
2	Meeteetse	B 5
2	Atlantic City	F 6
2	Tie Siding	H 12
2	Lusk	E 15
2	Hanna	G 10
2	Ranchester	A 9
2	Cody	A 5
2	Medicine Bow	G 11
2	Hyattville	B 8
2	Baggs	H 8
2	Bighorn	A 10
2	Clearmont	A 10
2	Gillette	B 13
1	Cokeville	F 2
1	Dayton	A 9
1	Pinebluff	H 16
1	Otto	B 7
1	Fort Bridger	H 3
1	Beulah	A 15
1	Parkman	A 9
1	Germania	B 6
1	Piedmont	H 2
1	Aladdin	A 15
1	Manville	E 14
1	Auburn	E 2
1	Fairview	E 2

COLORADO

Land area, 103,645 sq. m.
Water area, 280 sq. m.
Pop. 1900 . 539,700
Male . . . 295,332
Female . 244,368
Native . . 448,545
Foreign . 91,155
White . . 529,046
African . . . 8,570
Chinese 599
Japanese 48
Indian 1,437

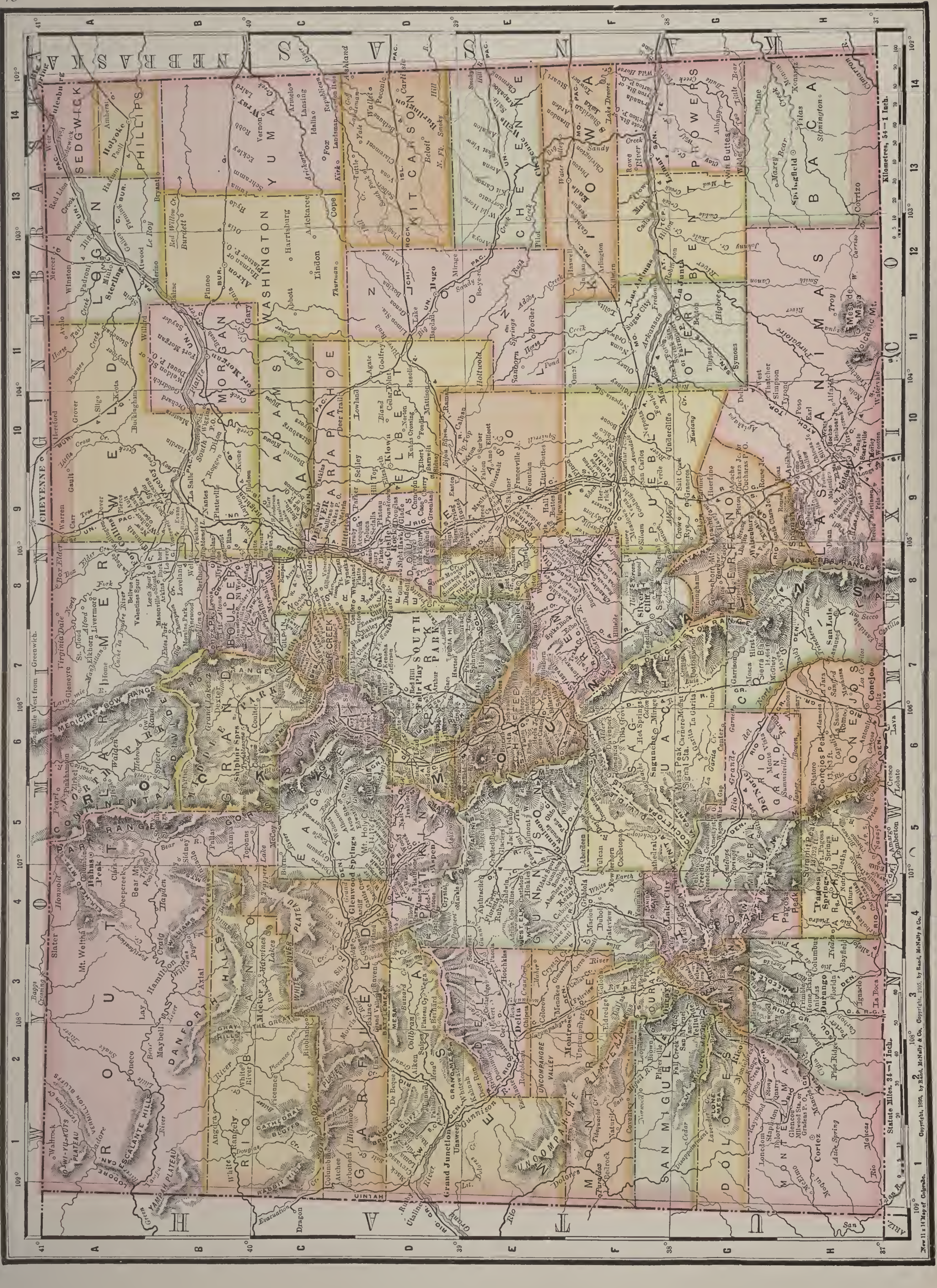
COUNTIES.

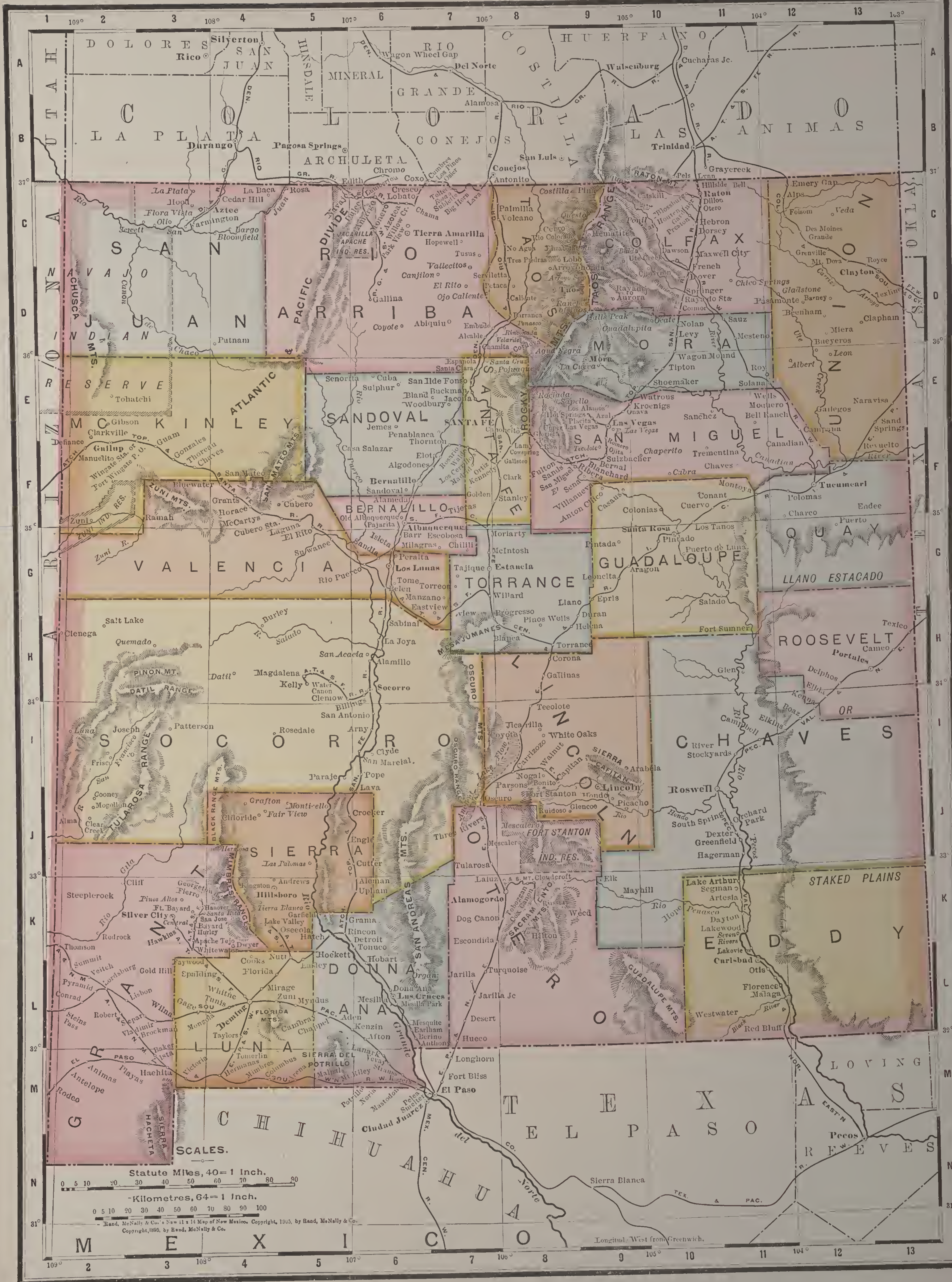
Adams	C 10
Arapahoe	C 10
Archuleta	H 5
Baca	H 13
Bent	G 12
Boulder	B 8
Chaffee	E 6
Cheyenne	E 13
Clear Creek	C 7
Couejos	H 6
Costilla	H 7
Custer	F 8
Delta	E 3
Denver	C 9
Dolores	G 1
Douglas	D 9
Eagle	C 5
Elbert	D 10
El Paso	E 9
Fremont	E 8
Garfield	D 2
Gilpin	C 7
Grand	B 6
Gunnison	E 4
Hinsdale	G 4
Huerfano	G 8
Jefferson	C 8
Kiowa	F 13
Kit Carson	D 13
Lake	D 6
La Plata	H 3
Larimer	A 7
Las Animas	H 10
Lincoln	E 11
Logan	A 12
Mesa	E 2
Mineral	G 5
Montezuma	H 1
Montrose	F 2
Morgan	B 11
Otero	G 11
Onray	F 3
Park	D 7
Phillips	A 14
Pitkin	D 5
Prowers	G 14
Pueblo	F 9
Rio Blanco	B 3
Rio Grande	G 6
Routt	A 3
Saguache	F 6
San Juan	G 3
San Miguel	F 2
Sedgwick	A 14
Summit	C 6
Teller	E 8
Washington	C 12
Weld	A 10
Yuma	C 14

CHIEF CITIES.

Pop. — Thousands.

134	Denver	C 9
28	Pueblo	F 9
21	Colorado Springs	E 9
12	Leadville	D 6
10	Cripple Creek	E 8
6	Boulder	C 8
5	Trinidad	H 9
5	Victor	E 8
4	Canon City	E 8
4	Florence	F 8
4	Salida	E 7
4	Grand Jc.	D 1
3	Durango	H 3
3	Aspen	D 5
3	Central City	C 7
3	Ft. Collins	A 8
3	Greeley	B 9
3	Colorado City	E 9
3	Lajunta	G 12
3	Idaho Springs	C 7
2	Telluride	G 3
2	Longmont	B 8
2	Ouray	F 3
2	Golden	C 8
2	Rockyford	F 11
1	Georgetown	C 7
1	Silverton	G 3
1	Glenwood Springs	C 4
1	Manitou	E 9
1	Black Hawk	C 8
1	Gunnison	E 5
1	Montrose	F 3
1	Las Animas	F 12
1	Hastings	H 9
1	Alamosa	H 7
1	Loveland	B 8
1	Walsenburg	G 9
1	Sterling	A 12
1	Buena Vista	E 6
1	Crested Butte	E 5
1	Lamar	F 13
1	Breckenridge	D 6
1	Lafayette	B 8
1	Louisville	C 8





NEW MEXICO

Land area, 122,460 sq. m.
Water area, 120 sq. m.
Pop. 1900 . 195,310
Male . . . 104 228
Female . . 91,082
Native . 18[illegible],685
Foreign . . 13,625
White . . . 180,207
African . . 1,610
Chinese . . 341
Japanese . . 8
Indian . . 13,144

COUNTIES.

Bernalillo . . . F 6
Chaves . . . . . . I 11
Colfax . . . . . C 10
Donna Ana L 6
Eddy . . . . K 11
Grant . . . . . . L 2
Guadaloupe G 10
Lincoln . . . . . . I 8
Luna . . . . L 5
McKinley . . . E 3
Mora . . . . D 10
Otero . . . . K 8
Quay . . . . G 13
Rio Arriba . D 6
Roosevelt . . H 13
Sandoval . . . E 6
San Juan . . . . D 3
San Miguel . . E 10
Santa Fe . . . . E 8
Sierra . . . . J 5
Socorro . . . . . . I 4
Taos . . . . C 8
Torrance . . . G 3
Union . . . . . . D 13
Valencia . . . G 5

CHIEF CITIES.

Pop.—Thousands.
6 Albuquerque G 7
6 Santa Fe . . E 7
4 Las Vegas . E 9
4 Raton . . . . C 11
3 Gallup . . E 2
3 Silver City . K 3
2 Roswell . . . J 10
2 Zuni . . . . . F 2
2 Socorro . . . H 6
1 Mora . . . E 9
1 Taos . . . . D 9
1 Lascruces . L 6
1 Mesilla . . . . L 6
1 Deming . . . L 4
1 Gardiner . . C 10
1 Alamogordo K 7
1 Lincoln . . . J 9
1 Pinos Altos I 6
1 San Marcial I 6
1 Carlsbad . . L 11

ARIZONA

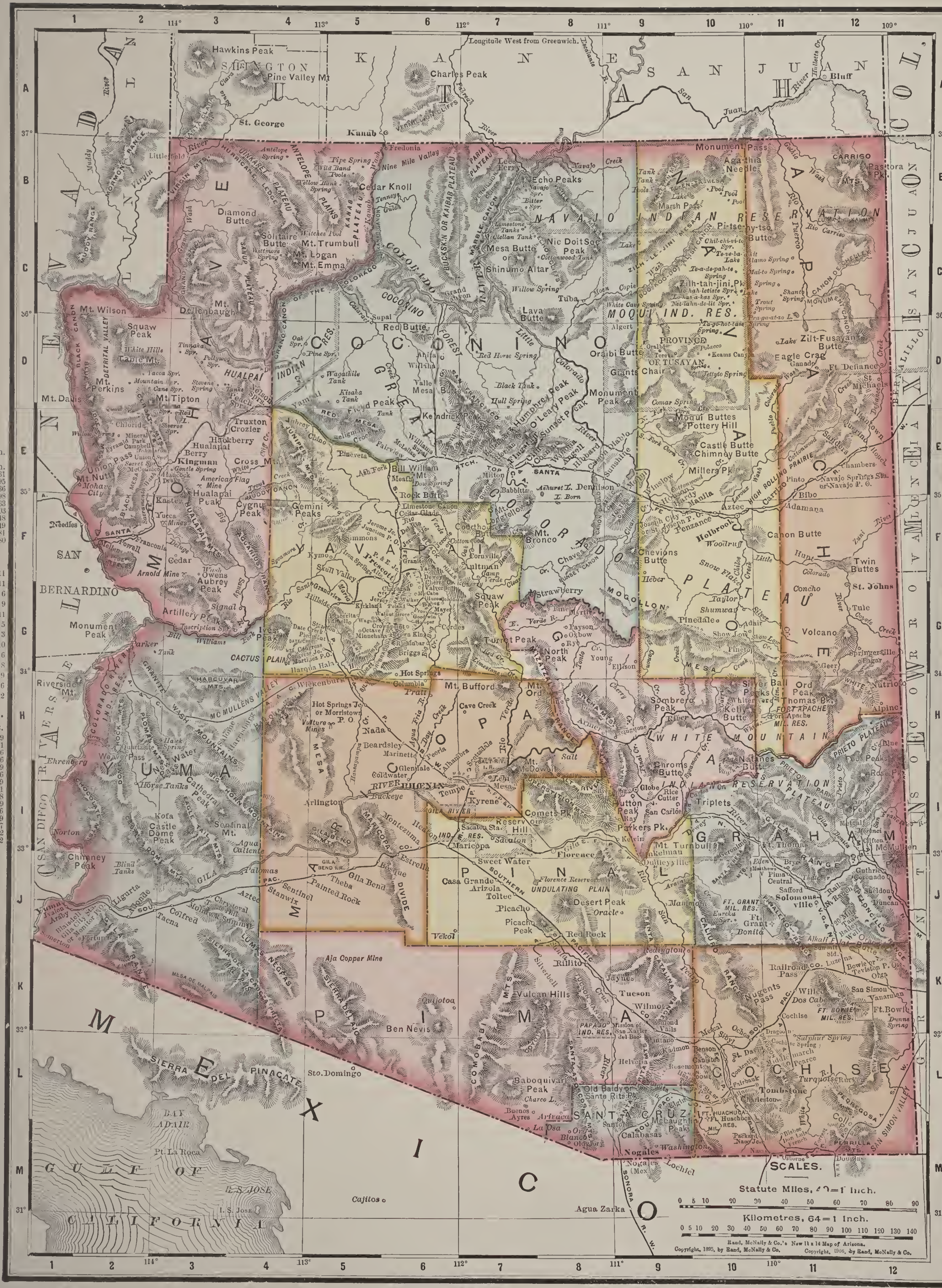
Land area, 112,920 sq. m.
Water area, 100 sq. m.
Pop. 1900..122,931
Male 71,795
Female ..51,136
Native ...98,698
Foreign..24,233
White.....92,903
African...1,848
Chinese...1,419
Japanese....281
Indian .. 26,480

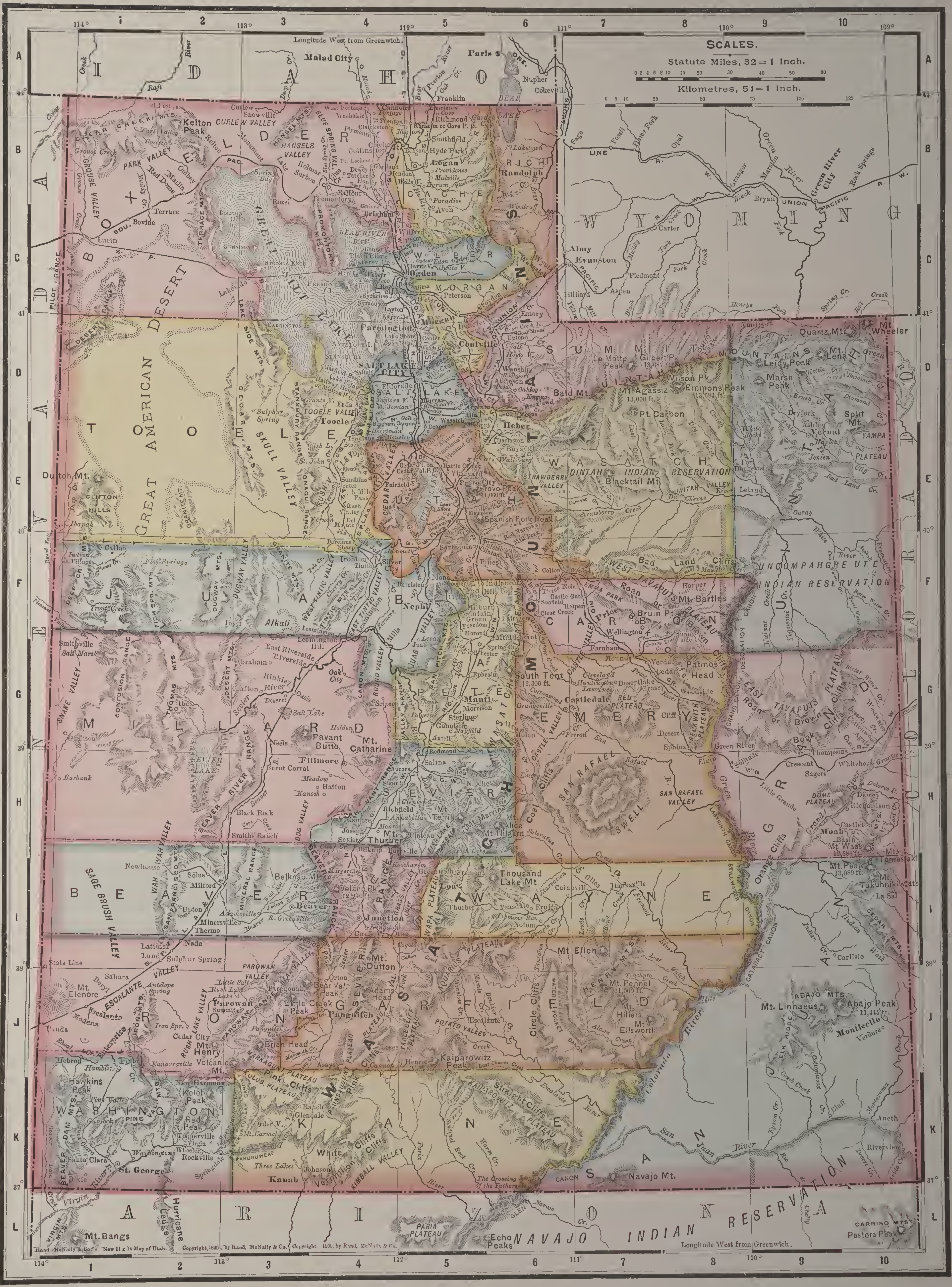
COUNTIES.

Apache ...	E 11
Cochise ...	L 11
Coconino ...	D 6
Gila	H 9
Graham.......	I 11
Maricopa	I 5
Mohave......	D 3
Navajo......	E 10
Pima.........	K 6
Pinal	J 8
Santa Cruz .	M 9
Yavapai ...	F 6
Yuma.........	I 2

CHIEF CITIES.

Pop. Thousands.		
8	Tucson	K 9
6	Bisbee	M 11
6	Phoenix	I 6
4	Prescott	F 6
3	San Carlos	I 9
3	Jerome	F 6
2	Nogales	M 9
2	Yuma	J 1
1	Florence	I 8
1	Globe	I 9
1	Williams	E 6
1	Winslow	E 9
1	Flagstaff	E 7
1	Morenci	I 12
1	St. Johns	G 12





UTAH

Land area, 82,190 sq. m.
Water area, 2,780 sq. m.

Pop. 1900	276,719
Male	141,687
Female	135,062
Native	222,972
Foreign	53,777
White	272,465
African	672
Chinese	572
Japanese	417
Indian	2,623

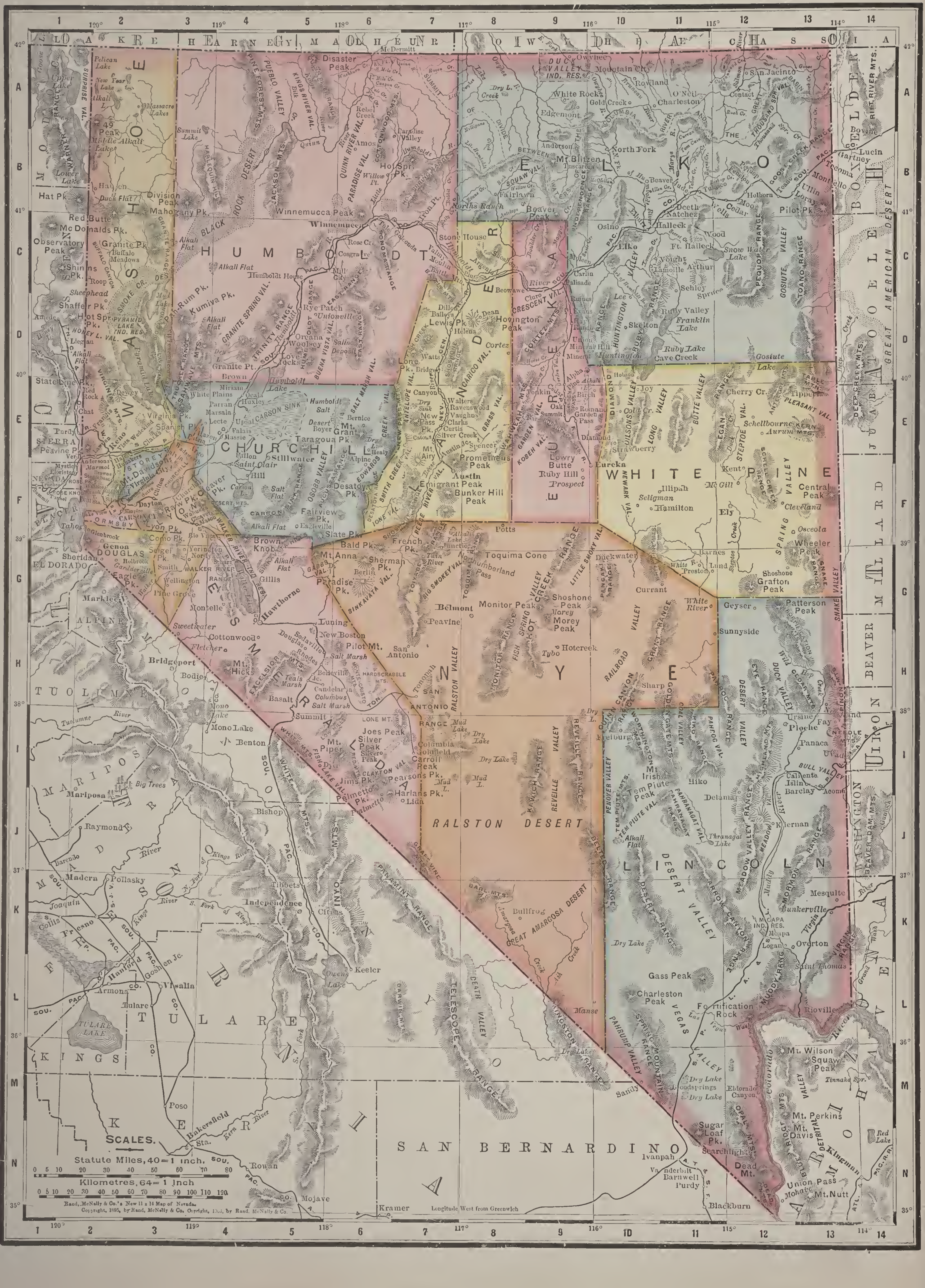
COUNTIES.

Beaver	I	2
Boxelder	B	2
Cache	B	5
Carbon	F	7
Davis	D	5
Emery	G	7
Garfield	J	5
Grand	H	9
Iron	J	2
Juab	F	2
Kane	K	4
Millard	G	2
Morgan	C	5
Piute	I	4
Rich	B	6
Salt Lake	D	5
San Juan	J	9
Sanpete	G	5
Sevier	H	5
Summit	D	7
Tooele	E	2
Uinta	E	9
Utah	E	5
Wasatch	E	7
Washington	K	1
Wayne	I	6
Weber	C	5

CHIEF CITIES.

Pop.—Thousands.

51	Salt Lake City	D	4
16	Ogden	C	5
6	Provo City	E	5
5	Logan	B	5
4	Park City	D	5
3	Springville	E	5
3	Eureka	F	4
3	Brigham	C	4
3	Spanish Fork	E	5
3	American Fork	E	5
3	Lehi City	E	5
3	Payson	E	5
2	Pleasant Grove	E	5
2	[illegible]	C	5
2	Mt. Pleasant	G	6
2	Mercur	E	4
2	Nephi	F	5
2	Ephraim	G	5
2	Richfield	H	4
2	Kaysville	D	4
2	Beaver	I	3
2	Hyrum	B	5
2	St. George	K	1
2	Heber	E	6
1	Smithfield	B	5
1	Bountiful	D	4
1	Cedar City	J	2
1	Moroni	F	6
1	Tooele	D	4
1	Spring City	G	6
1	Fairview	F	6
1	Richmond	B	5
1	Grantsville	D	4
1	Monroe	H	4
1	Parowan	J	3
1	Fillmore	H	4
1	Sandy	D	5
1	Farmington	D	4



NEVADA

Land area, 109,740 sq. m.
Water area, 960 sq. m.
Pop. 1900...42,335
Male ...25,603
Female ...16,732
Native ...32,212
Foreign ...10,093
White ...35,405
African ...134
Chinese ...1,352
Japanese ...228
Indian ...5,216

COUNTIES.

Churchill ...E 5
Douglas ...G 2
Elko ...B 10
Esmeralda ...H 5
Eureka ...D 9
Humboldt ...C 5
Lander ...D 8
Lincoln ...J 12
Lyon ...F 3
Nye ...H 9
Ormsby ...F 2
Storey ...F 2
Washoe ...C 2
White Pine ...F 11

CHIEF CITIES.

Pop.—Thousands.
4 Reno ...E 2
3 Virginia City F 2
2 Carson City F 2
1 Lovelocks D 5
1 Wadsworth E 3
1 Winnemucca C 6

CALIFORNIA

Land area, 155,980 sq. m.
Water area, 2,380 sq. m.
Pop. 1900. 1,485,053
Male 820,531
Female 664,522
Native 1,117,813
Foreign 367,240
White 1,402,727
African 11,045
Chinese 45,753
Japanese 10,151
Indian 15,377

COUNTIES.

Alameda	C 9
Alpine	E 6
Amador	E 5
Butte	D 4
Calaveras	E 5
Colusa	D 3
ContraCosta	B 9
Del Norte	B 2
Eldorado	E 5
Fresno	G 6
Glenn	D 3
Humboldt	C 2
Inyo	G 8
Kern	H 7
Kings	H 6
Lake	D 3
Lassen	C 5
Los Angeles	I 7
Madera	F 6
Marin	B 7
Mariposa	F 6
Mendocino	D 2
Merced	D 11
Modoc	B 5
Mono	F 6
Monterey	G 4
Napa	A 8
Nevada	D 5
Orange	J 8
Placer	E 4
Plumas	C 5
Riverside	J 9
Sacramento	B 10
San Benito	G 4
San Bernardino	H 9
San Diego	K 9
San Francisco	C 7
San Joaquin	F 4
San Luis Obispo	H 8
San Mateo	C 5
Santa Barbara	I 5
Santa Clara	D 9
Santa Cruz	D 9
Shasta	C 3
Sierra	D 5
Siskiyou	B 3
Solano	B 9
Sonoma	E 3
Stanislaus	C 11
Sutter	D 4
Tehama	C 3
Trinity	C 2
Tulare	G 7
Tuolumne	F 6
Ventura	I 6
Yolo	E 4
Yuba	D 4

CHIEF CITIES.

Pop.—Thousands.

343	San Francisco	F 3
102	Los Angeles	I 7
37	Oakland	F 3
29	Sacramento	E 4
21	San Jose	F 4
18	San Diego	K 8
18	Stockton	F 4
16	Alameda	C 8
13	Berkeley	C 8
12	Fresno	G 6
9	Pasadena	I 7
8	Riverside	J 8
8	Vallejo	B 9
7	Eureka	C 1
7	Santa Rosa	E 3
7	Santa Barbara	I 6
6	San Bernardino	I 8
6	Santa Cruz	G 3
6	Pomona	I 8
5	Santa Ana	J 8
5	Bakersfield	H 7
5	Redlands	I 9
5	Grass Valley	D 5
4	Napa	E 3
4	San Rafael	F 3
4	Petaluma	E 3
4	Santa Clara	F 3
4	Watsonville	E 9
3	Marysville	D 4
3	Salinas	G 4
3	Nevada City	D 5
3	Visalia	G 6
3	Santa Monica	J 7
3	San Luis Obispo	H 5
3	Angels Camp	E 5
3	Redding	C 3
3	Hanford	G 6
3	Woodland	E 4
3	Benicia	E 3
3	Red Bluff	C 3
3	Chico	D 1
2	Ventura	I 6
2	Jackson	E 5
2	San Leandro	C 8
2	Long Beach	J 2

OREGON

Land area, 94,560 sq. m.
Water area, 1,470 sq. m.
Pop. 1900 . . 413,536
Male 232,985
Female . 180,551
Native . . 347,788
Foreign . 65,748
White . . 394,582
African . . . 1,105
Chinese . . 10,397
Japanese . 2,501
Indian . . . 4,951

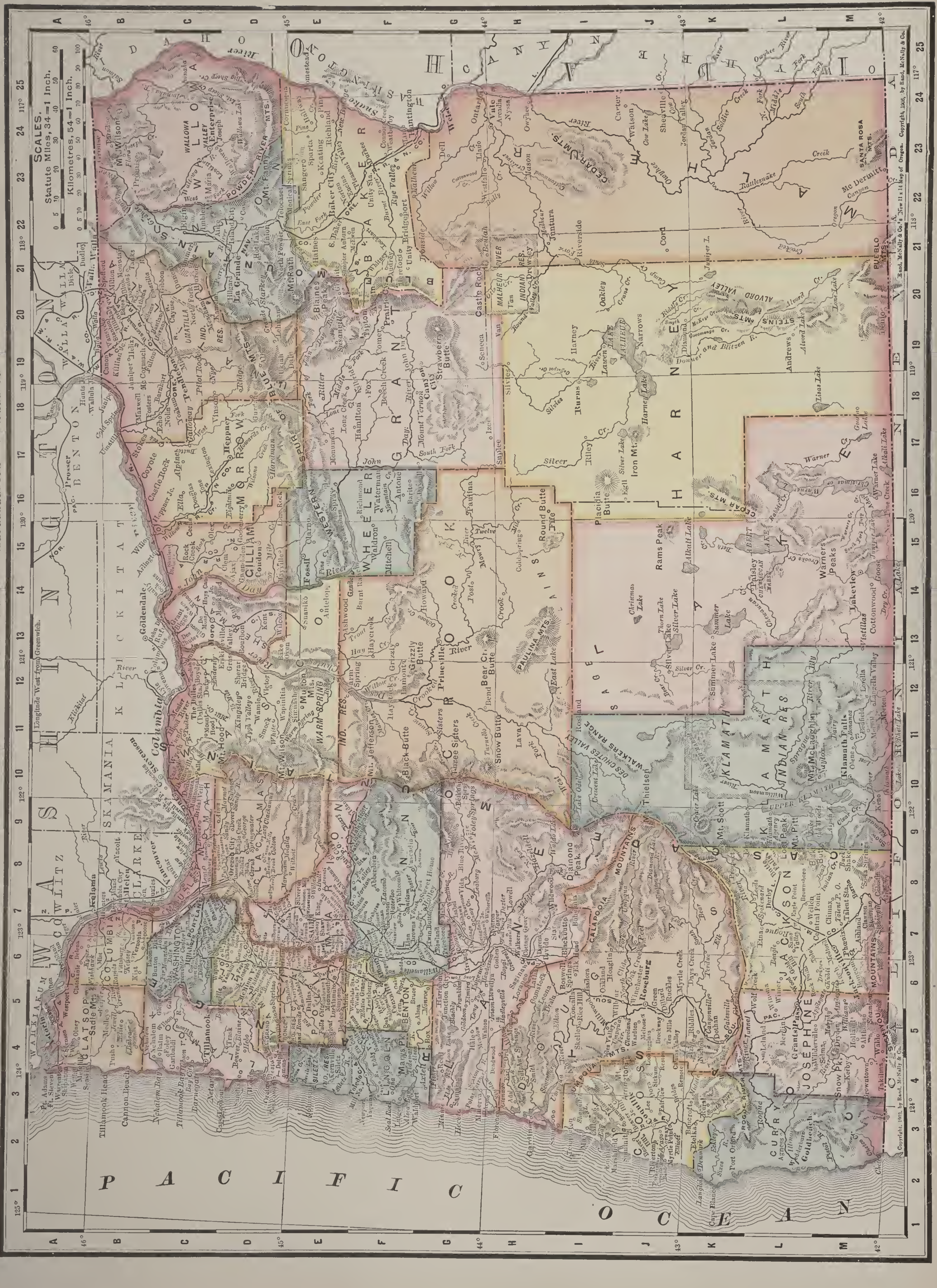
COUNTIES.

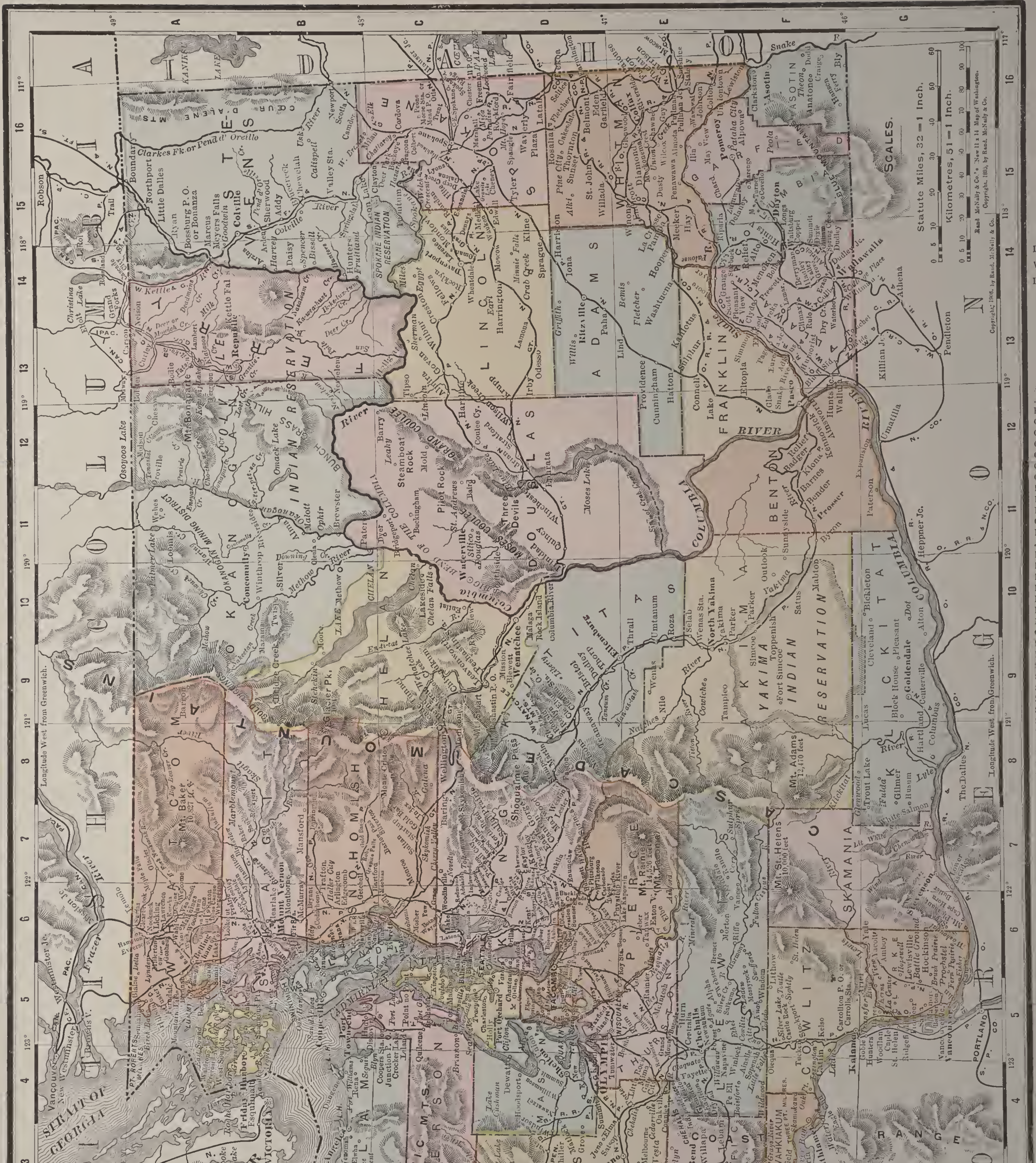
Baker	F	22
Benton	F	5
Clackamas	D	9
Clatsop	A	4
Columbia	B	6
Coos	J	3
Crook	G	12
Curry	L	3
Douglas	I	6
Gilliam	E	15
Grant	F	18
Harney	J	18
Jackson	L	7
Josephine	L	4
Klamath	L	11
Lake	K	14
Lane	G	5
Lincoln	F	4
Linn	F	8
Malheur	J	23
Marion	E	8
Morrow	D	17
Multnomah	C	8
Polk	E	5
Sherman	C	13
Tillamook	D	4
Umatilla	C	20
Union	D	22
Wallowa	C	24
Wasco	D	11
Washington	C	6
Wheeler	F	15
Yamhill	D	5

CHIEF CITIES.

Pop. —Thousands.

90	Portland	C	7
8	Astoria	A	4
7	Baker City	E	22
4	Pendleton	C	19
4	Salem	E	7
4	The Dalles	C	12
3	Oregon City	D	8
3	Eugene	G	6
3	Albany	F	6
3	La Grande	D	21
3	Ashland	M	7
2	Grants Pass	L	5
2	Corvallis	F	6
2	Medford	M	7
2	Sumpter	E	21
2	Roseburg	J	6
1	McMinnville	D	9
1	Marshfield	J	2
1	Dallas	E	5
1	Heppner	D	17
1	Forest Grove	C	6
1	Hillsboro	C	6
1	Cottage Grove	H	7





WASHINGTON

Land area, 66,880 sq. m.
Water area, 2,300 sq. m.
Pop. 1900..518,103
Male 304,178
Female .213,925
Native..406,739
Foreign 111,364
White ..496,304
African...2,514
Chinese...3,629
Japanese .5,617
Indian ...10,039

COUNTIES.

Adams	D 13
Asotin	F 16
Benton	F 11
Chehalis	D 3
Chelan	C 9
Clallam	B 3
Clarke	G 5
Columbia	F 15
Cowlitz	F 5
Douglas	D 11
Ferry	B 13
Franklin	E 13
Garfield	F 15
Island	B 5
Jefferson	C 3
King	D 7
Kitsap	C 5
Kittitas	D 9
Klickitat	G 9
Lewis	E 5
Lincoln	C 13
Mason	D 4
Okanogan	B 10
Pacific	E 3
Pierce	E 6
San Juan	A 5
Skagit	B 7
Skamania	F 7
Snohomish	B 7
Spokane	C 16
Stevens	B 14
Thurston	E 5
Wahkiakum	F 3
Wallawalla	F 13
Whatcom	A 7
Whitman	E 15
Yakima	F 10

CHIEF CITIES.

Pop.—Thousands.

81	Seattle	C 6
38	Tacoma	D 5
37	Spokane	C 16
22	Bellingham	A 6
10	Wallawalla	F 14
8	Everett	C 6
5	Ballard	C 6
4	Fairhaven	A 6
4	Olympia	D 5
4	Vancouver	G 5
4	Aberdeen	D 3
3	Port Townsend	B 5
3	North Yakima	E 10
3	Roslyn	D 9
3	Hoquiam	D 3
2	Port Angeles	B 3
2	Dayton	F 15
2	Colfax	E 16
2	Snohomish	C 6
2	Republic	A 13
2	Puyallup	D 6
2	Chehalis	E 5
2	Ellensburg	D 9
2	Centralia	E 5
2	Blaine	A 5
1	Anacortes	B 5
1	Pullman	E 16
1	Montesano	D 3
1	Mount Vernon	B 6
1	Steilacoom	D 5
1	Buckley	D 6
1	Waitsburg	F 14
1	Cosmopolis	E 3
1	Davenport	C 14
1	Pomeroy	E 16

ALASKA

Total area, 590,884 sq. m.

Pop. 1900	63,592
Male	45,872
Female	17,720
Native	50,931
Foreign	12,661
White	30,493
Mixed	2,499
Indian	29,536
African	168
Chinese	3,116
Japanese	279

DISTRICTS.

	Pop. 1900
Northern	30,569
Southern	33,023

CHIEF CITIES.

Pop.—Thousands.

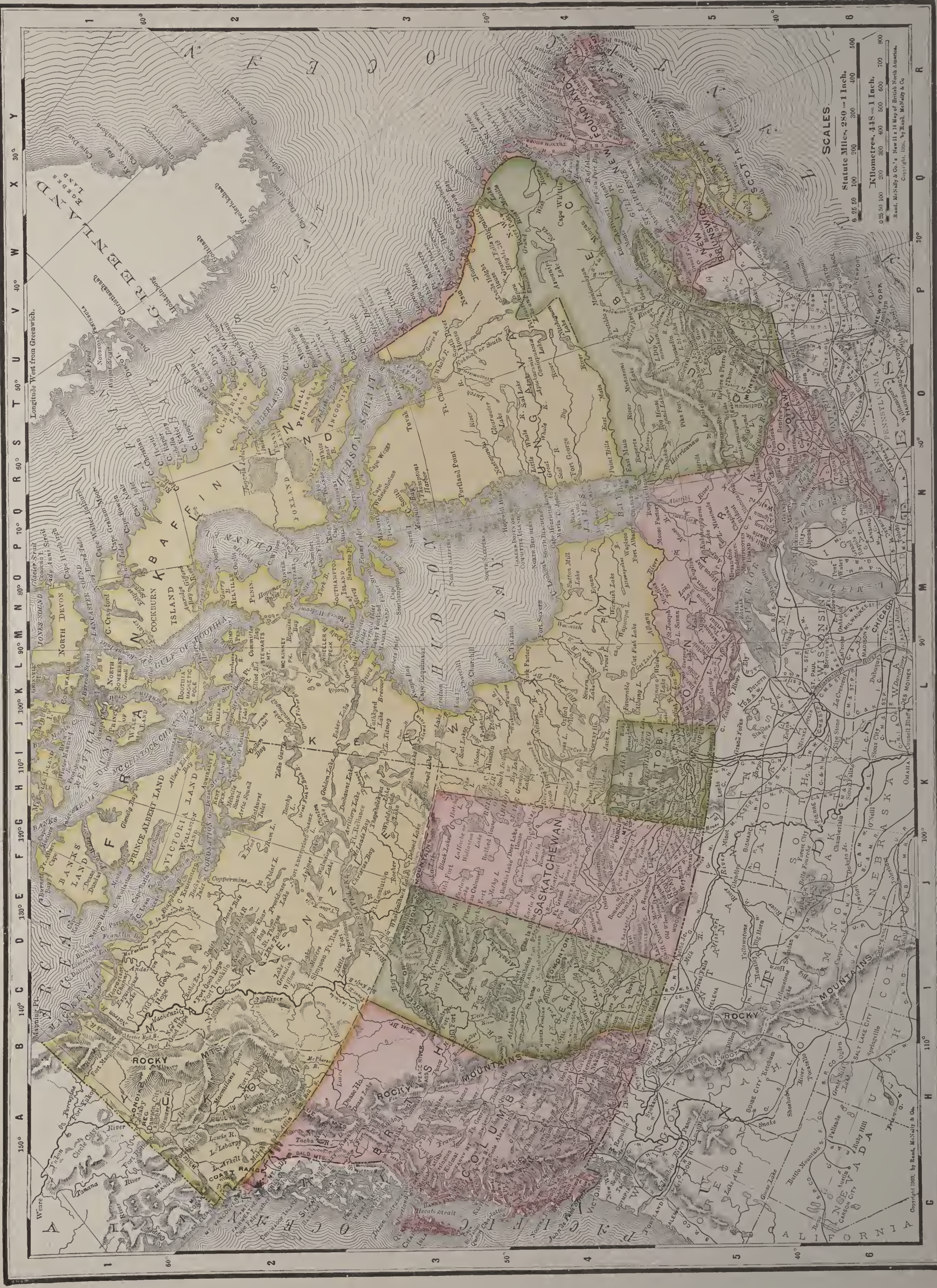
12	Nome	B 2
3	Skagway	C 9
2	Juneau	C 9
1	Sitka	C 8

Pop.—Hundreds.

9	Wrangel	C 9
9	St. Michael	B 3
8	Douglas	C 9
6	Point Hope	A 2
5	Kogiung	C 4
5	Karluk	C 5
5	Metlakahtla	D 9
5	Ketchikan	C 9
5	Eagle	A 7
4	Unalaska	D 2
4	Cape Prince of Wales	A 2
3	Ugashik	C 4
3	Kodiak	C 5
3	Nushagak	C 4
3	Valdez	B 6
3	Afognak	C 5
3	Kenai	B 5
3	Nulato	B 4
3	Dyea	C 9
2	Jackson	D 9
2	Yakutat	C 8
2	Circle	A 7
2	Rampart	A 6
2	Igagik	C 4
2	Tanana	B 5
2	Unga	C 3
2	Orca	B 6
2	Killisnoo	C 9
2	Loring	C 9
2	Anvik	B 3
2	Ft. Yukon	A 7
1	Seldovia	C 5
1	Belkoffski	D 3
1	Sumdum	C 9
1	Koserefsky	B 4
1	Klawock	C 9
1	Sunrise	B 6
1	Tyoonok	B 5
1	Shakan	C 9
1	Haines	C 8
1	Eaton	B 3
	Udakta	D 2

KLONDIKE REGION.

Dawson	B 8
Fort Cudahy	B 8
Forty Mile Post	B 7
Fort Reliance	B 8
Sixty Mile Post	B 7
Klondike River	B 8
Bonanza Creek	B 8



BRITISH NORTH AMERICA

Area, 3,825,280 sq. m.
Pop. 5,592,299

Newfoundland and Labrador S 4
Area, 162,734 sq. m.
Pop. 220,984
St. Johns (Capital).T 4

CANADA

Area, 3,745,574 sq. m.
Pop. 5,371,315
Ottawa (Capital).O 5

PROVINCES AND DISTRICTS.

Alberta G 3
Edmonton (Capital).H 3

Br. Columbia F 3
Area, 372,631 sq. m
Pop. 178,657
Victoria (Capital).E 4

Franklin...M 1

Keewatin...K 1
Area, 756,000 sq. m
Pop.......

Mackenzie F 1

Manitoba K 3
Area, 64,327 sq. m.
Pop. 255,211
Winnipeg (Capital).K 4

New Brunswick..Q 4
Area, 27,985 sq. m.
Pop. 331,120
Fredericton (Capital)..Q 4

Nova Scotia R 5
Area, 21,428 sq. m.
Pop. 459,574
Halifax (Capital)..R 5

Ontario ...N 4
Area, 260,862 sq. m
Pop. 2,182,947
Toronto (Capital).. N 5

Prince Edw. Is. R 4
Area, 2,184 sq. m.
Pop. 103,259
Charlottetown (Capital)..R 4

Quebec......P 4
Area, 351,873 sq. m
Pop......1,648,898
Quebec (Capital)..P 4

Saskatchewan I 3
Regina (Capital) I 4

Ungava ... P 3

Yukon ..... D 1
Area, 198,300 sq. m
Pop. 27,167

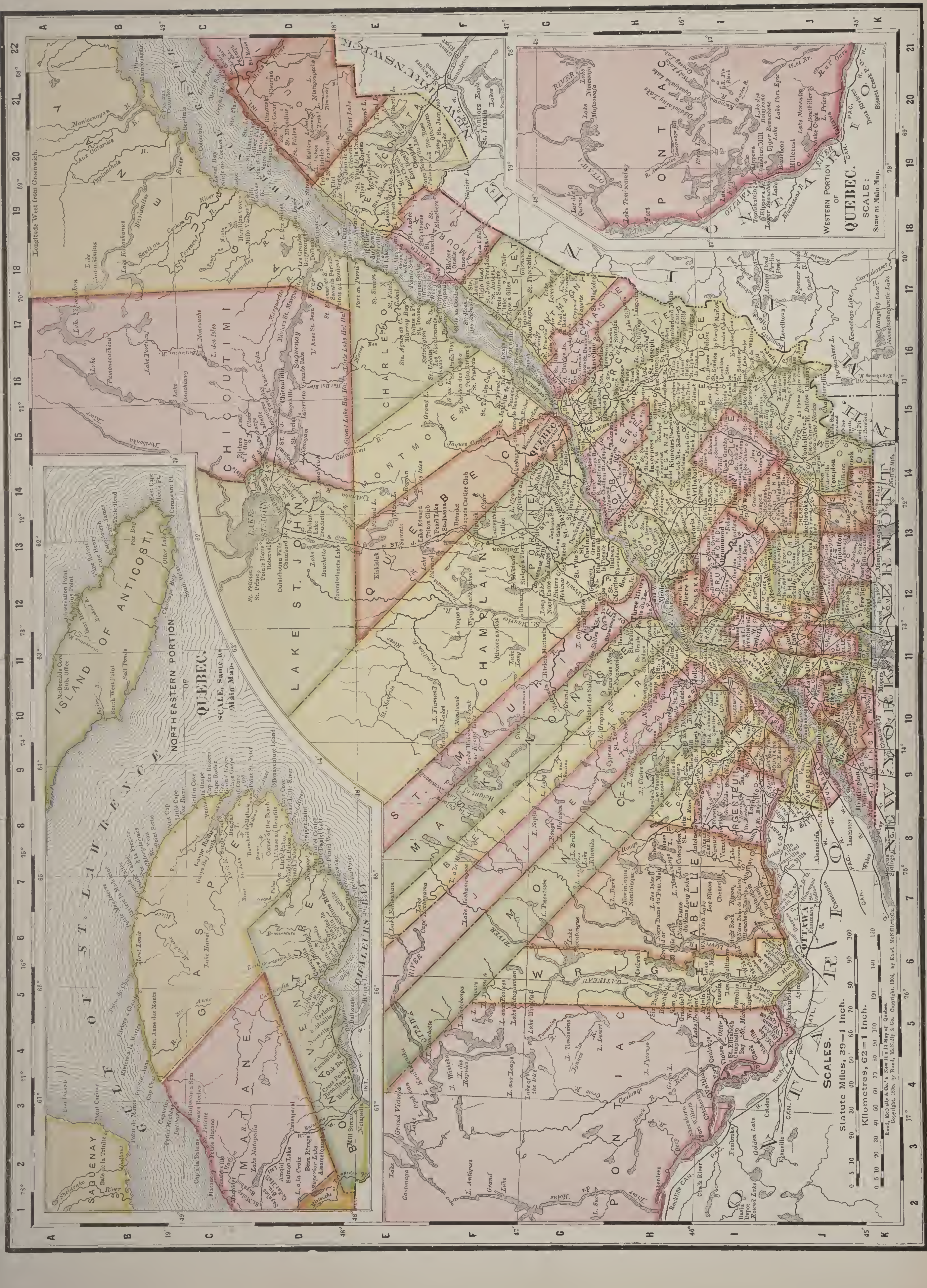
QUEBEC

Area, 351,873 sq. m.
Pop. 1,648,898
Native 1,560,190
Foreign. . 88,708

CHIEF CITIES.

Pop.—Thousands.

268 Montreal I 11
69 Quebec G 15
21 St. Henri. I 10
14 Hull . . . . . . J 6
12 Sherbrooke J 14
11 Valleyfield J 9
11 Mile End . I 10
10 Three Rivers. . H 12
9 St. Hyacinthe I 12
8 Levis. . . . . . G 15
7 Sorel. . . . . . H 11
6 Lachine . . . J 10
5 Riviere du Loup. . E 18
4 Joliette. . . H 11
4 St. Johns. . J 11
4 Chicoutimi D 15
4 Granby. . . J 12
4 St. Jerome. I 9
4 Magog. . . . . J 13
3 St. Joseph de Levis. . G 15
3 Farnham . . J 12
3 Buckingham I 7
3 Coaticook . J 14
3 Longueuil . I 11
3 Shawenegan H 12
2 Aylmer. . . . J 6
2 Nicolet H 12
2 Windsor Mills I 14
2 Richmond . I 13
2 Lachute . . . J 9
2 Beauharnois J 10
2 Montmagny G 17
2 Megantic . . I 16
2 Terrebonne I 10
2 Rimouski . D 20
2 Waterloo. . . J 13
2 Victoria- ville . . H 14
2 Louiseville H 12
2 L'Assomption I 11
2 Plessisville H 14
2 Gatineau . . I 6
2 Lorette . . . G 15
2 Ste. Therese Junction. . I 10
2 St. Gregoire H 13
1 St. Paul. . . I 11
1 Laprairie . J 10
1 Drummond- ville I 13
1 St. Paul's Bay F 16
1 Bedford . J 12
1 Berthier . H 11
1 St Lambert J 11
1 Ste. Anne de Bellevue J 10
1 Beauport . G 15
1 Marieville J 11
1 St. Raymond G 14
1 BlackLake H 15
1 Roberval. . C 13
1 St. Jean des Chaillons . G 13
1 Lorette . . . G 15
1 St. Gabriel de Brandon. H 11
1 Acton . . . . . . I 12
1 Caughnawaga J 10
1 Cap St. Ignace F 17
1 Trois Pistoles D 19
1 Huntingdon J 9
1 Lennoxville J 14
1 St. Joseph de Beauce H 16
1 St. Octave de Metis . C 21
1 Pierreville H 12
1 Yamachiche H 12
1 St. Remi . . J 10
1 St. Eustache I 10
1 Ste. Agathe des Monts H 9
1 D'Israeli . . I 15
1 Danville . . I 13
1 St. Charles Junction. G 16
1 Arthabaska- ville H 14
1 St. Tite . G 12
1 Chambly Canton. J 1



ONTARIO

Area. 260,862 sq. m.
Pop.......2,182,947

CHIEF CITIES.

Pop.—Thousands.

Pop.	City	Index
208	Toronto	I 6
60	Ottawa	P 3
53	Hamilton	H 7
38	London	E 8
18	Kingston	N 5
17	Brantford	G 7
12	Windsor	A 9
11	Guelph	G 7
11	St. Thomas	E 8
11	Peterborough	K 5
10	Stratford	F 7
10	St. Catharines	I 7
10	Berlin	F 7
9	Belleville	M 5
9	Chatham	C 9
9	Brockville	P 4
9	Woodstock	F 7
9	OwenSound	F 4
9	Sarnia	C 8
8	Galt	G 7
8	Port Dover	G 8
7	Sault Ste. Marie	O 9
7	Lindsay	J 5
7	Cornwall	R 3
6	Toronto Jc.	H 6
6	Collingwood	G 5
5	Rat Portage	K 8
5	Pembroke	M 2
5	Smith's Falls	P 4
5	Orillia	I 4
5	Barrie	H 5
5	Ingersoll	F 8
4	Oshawa	J 6
4	Niagara Falls	I 7
4	Cobourg	K 6
4	Port Hope	K 6
4	Goderich	D 6
4	Arnprior	O 4
4	Hawkesbury	R 2
4	Petrolea	C 8
4	Carleton Place	O 3
4	Picton	M 6
4	Ft. William	M 8
4	Perth	O 4
4	Waterloo	F 7
4	Deseronto	M 5
4	Gananoque	O 5
3	St. Marys	E 7
3	Paris	G 7
3	Port Arthur	M 8
3	Midland	H 4
3	Dundas	H 7
3	Renfrew	N 3
3	Napanee	N 5
3	Almonte	O 3
3	Prescott	Q 4
3	Walkerton	E 5
3	Strathroy	D 8
3	ParrySound	G 3
3	Wallaceburg	C 8
3	Brampton	H 6
3	Bowmanville	J 6
3	Listowel	F 6
3	Simcoe	G 8
3	Clinton	D 8
3	North Bay	R 9
3	Orangeville	G 6
2	Campbellford	L 5
2	Bracebridge	I 3
2	Hespeler	G 7
2	Leamington	B 9
2	Wiarton	E 4
2	Ridgetown	D 9
2	Wingham	E 6
2	Preston	Q 4
2	Amherstburg	A 9
2	Aylmer	F 8
2	Seaforth	E 6
2	Tilsonburg	F 8
2	Huntsville	I 3
2	Gravenhurst	I 4
2	Newmarket	I 5
2	Whitby	I 6
2	Dunnville	H 8
2	Kincardine	D 5
2	Sudbury	Q 9
2	Mount Forest	F 6
2	Rockland	Q 2
2	Thorold	I 7
2	Mitchell	E 7
2	Meaford	F 4
2	Alexandria	R 3
2	Welland	I 8
2	Palmerston	F 6
2	Exeter	D 7
2	Chesley	E 5
2	Merritton	I 7
2	Morrisburg	Q 4
2	Vankleek Hill	R 2
2	Uxbridge	I 5
2	Blenheim	C 9
2	Ashburnham	K 5
2	Oakville	H 7
2	Harriston	F 6
2	Southampton	D 4
2	Walkerville	B 9
2	Aurora	I 5
2	Forest	C 7
2	Kingsville	B 9
1	Acton	H 6
1	Port Perry	I 5
1	Sandwich	A 9
1	Parkhill	D 7
1	Durham	F 5
1	Sturgeon Falls	R 9
1	Mattawa	J 1
1	Fergus	G 6
1	Hanover	F 5
1	Essex	B 9
1	Brighton	L 5
1	Cardinal	Q 4
1	Milton	H 6
1	Georgetown	H 6
1	Port Elgin	E 5
1	Arthur	F 6
1	Watford	D 8
1	Norwich	F 8
1	Niagara	I 7
1	Allston	H 5

N. BRUNSWICK

Area, 27,985 sq.m.
Pop. 331,120

DISTRICTS.

Albert .... I 5
Carleton ...... D 4
Charlotte ..... D 6
Gloucester .... G 2
Kent .... H 4
Kings .... F 6
Northumberland .... F 2
Queens .... F 5
Restigouche ... D 1
St. John ...... G 6
Sunbury .... F 5
Victoria ...... C 2
Westmoreland ..... I 4
York .... D 5

CHIEF CITIES.

Pop.—Thousands.

41 St. John .. F 6
9 Moncton .... I 5
7 Fredericton E 5
5 Chatham .. H 3
3 Grand Manan Island. E 7
3 Woodstock D 4
3 St. Stephen D 6
3 Campbellton . E 1
3 Newcastle. G 3
2 Milltown . D 6
2 Marysville. E 5
2 Fairville ... F 6
2 Bathurst .. G 2
1 Sackville ... J 5
1 Sussex ..... H 4
1 Rogersville G 3
1 Dorchester I 5
1 Waterford H 5
1 Quaco ..... G 6
1 Shediac .... G 4
1 St. Andrews D 6
1 Bathurst Village .. G 1

Pop.—Hundreds.

9 St. George. E 6
9 Dalhousie . F 1
8 Caraquet .. I 1
8 Gibson .... E 5
8 Richibucto. I 3
8 Cocaigne Station .. I 4
8 Petitcodiac H 5
7 Hampton G 5
7 Hillsborough I 5
6 Grand Falls C 2
6 McAdam Junction .. D 5
6 Kouchibouguac H 3
6 Shippigan . I 1
6 St. Martins H 6
5 Hartland .. D 4
5 St. Joseph .. I 5
4 Edmundston B 2
4 Albert ...... I 5
4 Havelock .. H 5
4 Tracadie ... I 2
4 Bridgetown H 1
4 Fredericton Junction . E 5
4 Harvey ..... I 5
4 Penobsquis H 5
4 Wilson's Beach .. D 7
4 Nelson .... G 3
4 Cape Bald .. J 4
4 Centreville C 4
4 Beresford . G 1
4 Blackville . G 3
4 Bristol .... C 4
4 Chipman ... G 4
4 Harcourt .. H 3
4 Middle Southampton. D 5
4 Tabucintac. I 2
3 Great Shemogue ...... J 4
3 Loggieville B 10
3 Andover ... C 3
3 Baie Verte J 4
3 Bass River. G 1
3 Millville D 4
3 Port Elgin . J 4
3 River Charlo E 1
3 Moore's Mills D 6
3 Upper Sackville .. J 5
3 Buctouche . I 4
3 Hopewell Cape .. I 5

NOVA SCOTIA

Area, 21,428 sq.m.
Pop. 459,574

DISTRICTS.

Annapolis .. H 7
Antigonishe O 6
Cape Breton R 5
Colchester .. L 6
Cumberland J 5
Digby .... G 8
Guysborough .... O 6
Halifax ..... L 7
Hants .... J 7
Inverness .. P 4
Kings .... I 7
Lunenburgh I 8
Pictou ..... M 6
Queens ..... H 8
Richmond .. Q 5
Shelburne . H 9
Victoria .... Q 4
Yarmouth .. G 9

CHIEF CITIES.

Pop.—Thousands.

41 Halifax . K 7
10 Sydney R 4
7 Glace Bay S 4
6 Truro ..... L 4
6 Yarmouth F 9
5 Spring Hill J 5
5 Amherst J 5
5 Dartmouth K 7
5 North Sydney ..... R 4
4 New Glasgow ..... M 6
3 Windsor J 7
3 Pictou .. M 5
3 Sydney Mines ... R 4
3 Lunenburg J 8
3 Parrsboro J 6
2 Westville M 6
2 Liverpool . I 9
2 Bridgewater J 8
2 Canso ..... P 6
2 Kentville . J 7
2 Bridgeport S 4
2 Louisburg R 5
2 Antigonishe N 5
1 Shelburne H 9
1 Stellarton M 6
1 Wolfville . J 6
1 Oxford .. K 5
1 Oyster Ponds P 6
1 Digby ..... G 7
1 Lorway Mines .. S 4
1 Annapolis Royal H 7
1 Trenton .. M 5
1 Milton ..... I 9

Pop.—Hundreds.

9 L'Ardoise. Q 6
9 Mahone Bay J 8
9 Bridgetown H 7
8 Berwick .. I 6
8 Arichat .... P 6
8 River Hebert J 5
7 River Bourgeois .. Q 5
7 Westport . F 8
7 Hantsport. J 7
6 Guysborough . O 6
6 Port Hawkesbury .. P 5
6 Lockeport. I 4
6 West Arichat Q 6
6 Shubenacadie I 6
6 Baddeck .. Q 4
6 Port Medway J 8
6 Chester .... J 7
6 Port Hood O 4
5 Middleton H 7
5 Kemptville G 8
5 Pugwash . K 5
5 Port Mulgrave O 5
5 Port Maitland F 9
5 Canning .. J 6
5 Brookfield L 6
5 Meteghan . F 8
5 Isaac's Harbour .. O 6
5 Maitland . K 6
5 Bedford .. K 7

PRINCE EDWARD ISLAND

Area .. 2,184 sq.m.
Pop. 103,259

DISTRICTS.

Kings .... M 4
Prince .... J 4
Queens ...... L 4

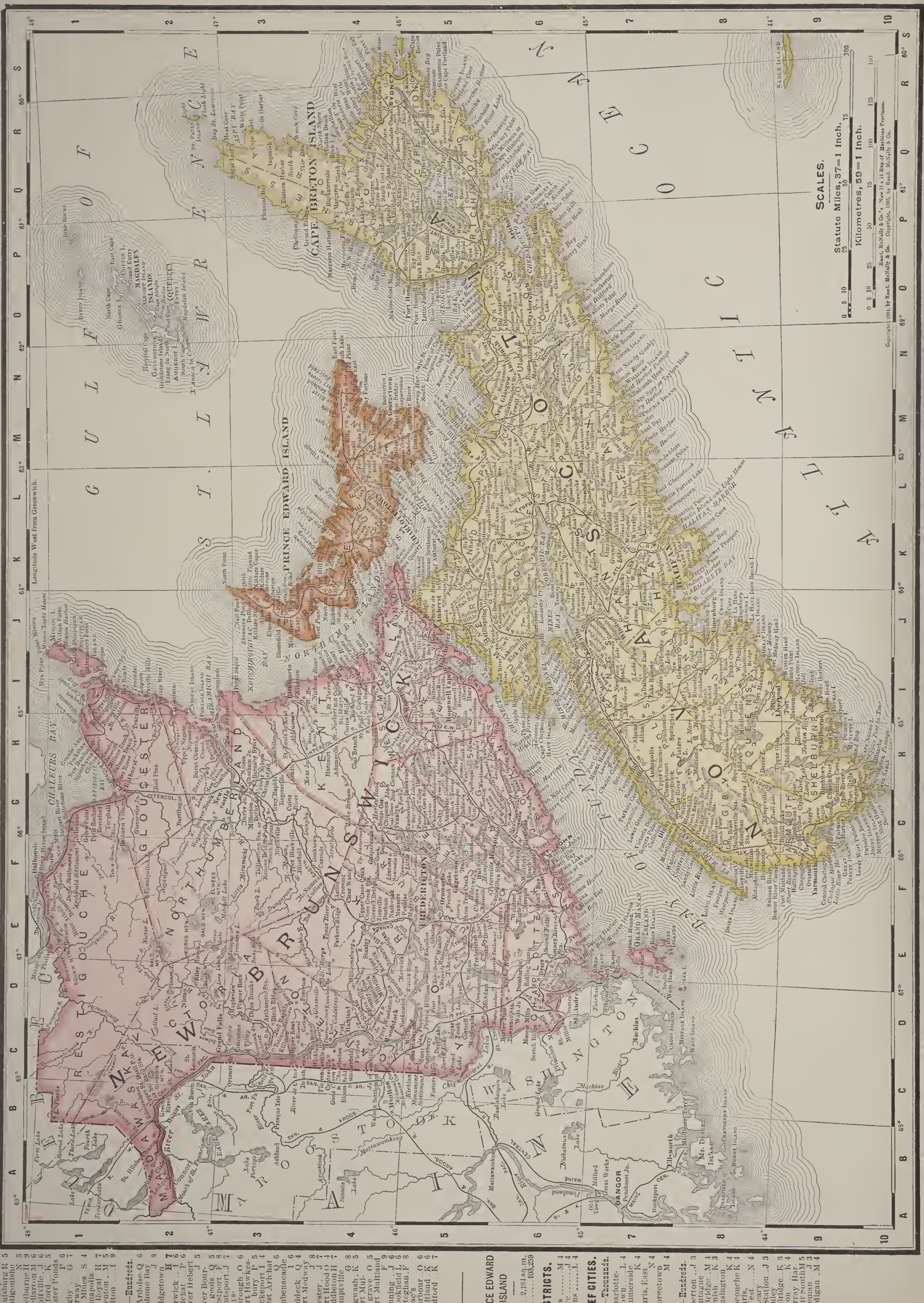
CHIEF CITIES.

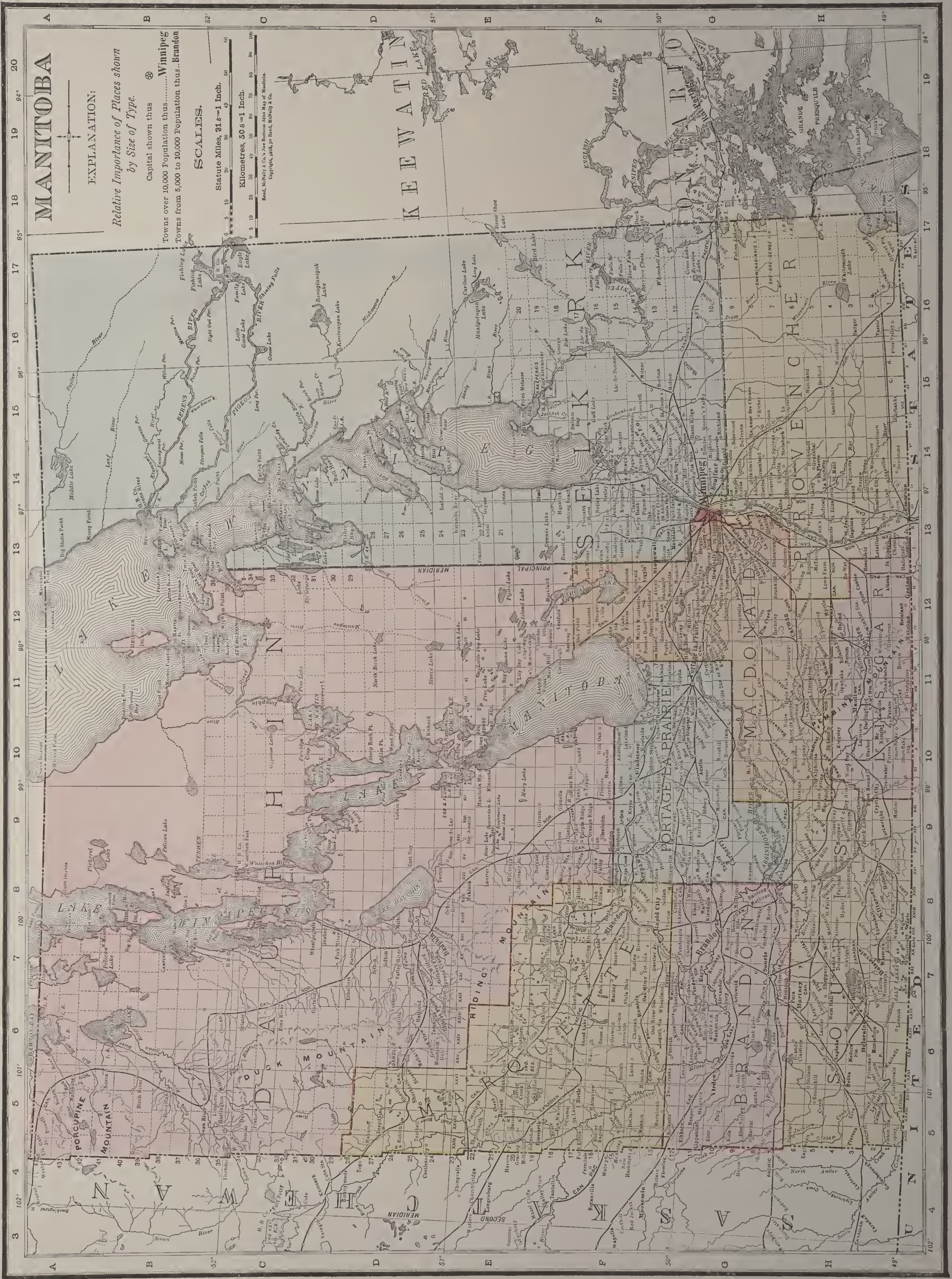
Pop.—Thousands.

12 Charlottetown ..... L 4
3 Summerside K 4
1 Souris, East N 4
1 Georgetown M 4

Pop.—Hundreds.

7 Alberton .. J 3
6 Montague Bridge .. M 4
4 Tignish .... K 3
4 Kensington K 4
3 Miscouche K 4
3 Souris, West .... N 4
2 O'Leary Station .. J 3
2 Stanley Bridge .. K 3
2 Tryon ..... K 4
2 Murray Harbour South M 5
2 Coleman .. J 3
2 Cardigan . M 4





MANITOBA

Area, 64,327 sq. m.
Pop. 254,947

CHIEF CITIES.

Pop.—Thousands.

42 Winnipeg G 14
5 Brandon ..G 7
4 Portage la Prairie..G 11
2 West Selkirk F 14
2 St. Boniface G 14
2 Morden .. H 11
1 Carman .. H 12
1 Neepawa F 8
1 Dauphin .. E 7
1 Minnedosa F 8
1 Carberry .. F 9

Pop.—Hundreds.

9 Virden....G 6
9 Boissevain H 7
8 Emerson .H 13
8 Souris. ...G 7
7 Gladstone F 10
7 Deloraine. H 6
7 Gretna .. H 12
6 Manitou ..H 11
6 Stonewall F 13
6 Killarney H 8
6 Rapid City F 8
5 Hartney ..H 7
5 Melita .....H 6
5 Birtle ..... F 5
5 Morris H 13
5 Glenboro'.H 9
4 Pilot Mound H 10
4 Macgregor G 10
4 Treherne .H 10
4 Russell....E 5
4 Crystal City H 9
4 Plum Coulee H 12
4 Elkhorn ..G 5
4 Holland ..H 10
4 Shoal Lake F 6
4 Ste. Anne des Chenes..G 14
4 Hamiota ..F 6
4 Steinbach H 14
4 Winnipegosis..C 6
4 Stony Mountain..G 13
3 Roland ...H 12
3 Oak Lake.G 6
3 Gimli ......E 14
3 Cypress River..G 9
3 Alexander G 7
3 Baldur.....H 9
3 Dominion City..H 13
3 Miami ....H 11
3 East Selkirk F 14
3 Cartwright H 9
3 Griswold .G 7
3 Letellier..H 13
3 Reinland .H 12
2 Swan River B 5
2 Elgin ......H 7
2 St. Jean Baptiste..H 13
2 Napinka..H 6
2 St. Norbert G 13
2 Austin..... G 10
2 Douglas ..G 8
2 Lyonshall H 8
2 St. Pierre H 14
2 Oak River F 7
2 Ninga......H 8
2 Belmont ..H 9
2 Newdale ..F 7
2 Arden .... F 9
1 Rosenfeld H 13
1 Pierson ...H 5
1 Binscarth. E 5
1 Grand View D 6
1 Sidney ....G 9
1 Gilbert Plains..E 6
1 Elm Creek G 12
1 Strathclair F 7
1 Somerset .H 10
1 Holmfield .H 8
1 Swan Lake H 10
1 Selkirk ...F 14
1 Westbourne F 11
1 Makinak..E 8
1 Altona....H 12
1 Headingly G 13
1 Rathwell .H 10
1 Tyndall ...F 14

BRITISH COLUMBIA

Area. 372,631 sq. m.
Pop. 178,657

ELECTORAL DISTRICTS.

Cariboo . C 19
New Westminster. J 16
Vancouver. K 15
Victoria.... M 15
Yale .... I 21

PROVINCIL DISTRICTS.

Alberni ..... L 13
Cariboo .... C 18
Cassiar D 6 and C 30
Comox . I 10
Cowichan .. K 11
East Kootenay H 30
Esquimalt .. L 14
Island ...... K 14
Lillooet ..... G 16
Nanaimo, North.. K 13
Nanaimo, South .. K 13
New Westminster. J 16
Victoria .. M 15
West Kootenay. I 27
Yale ...... I 21

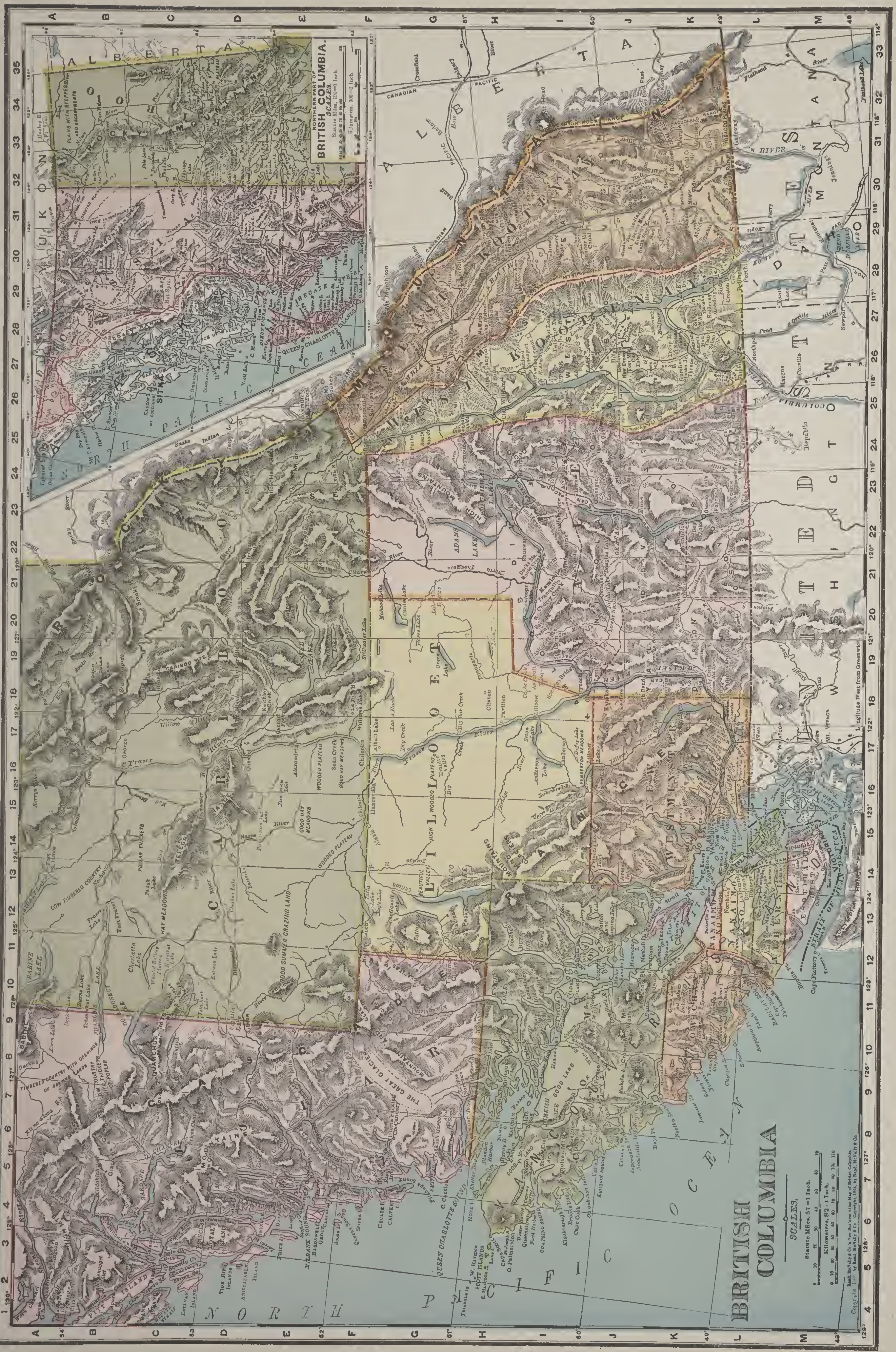
CHIEF CITIES.

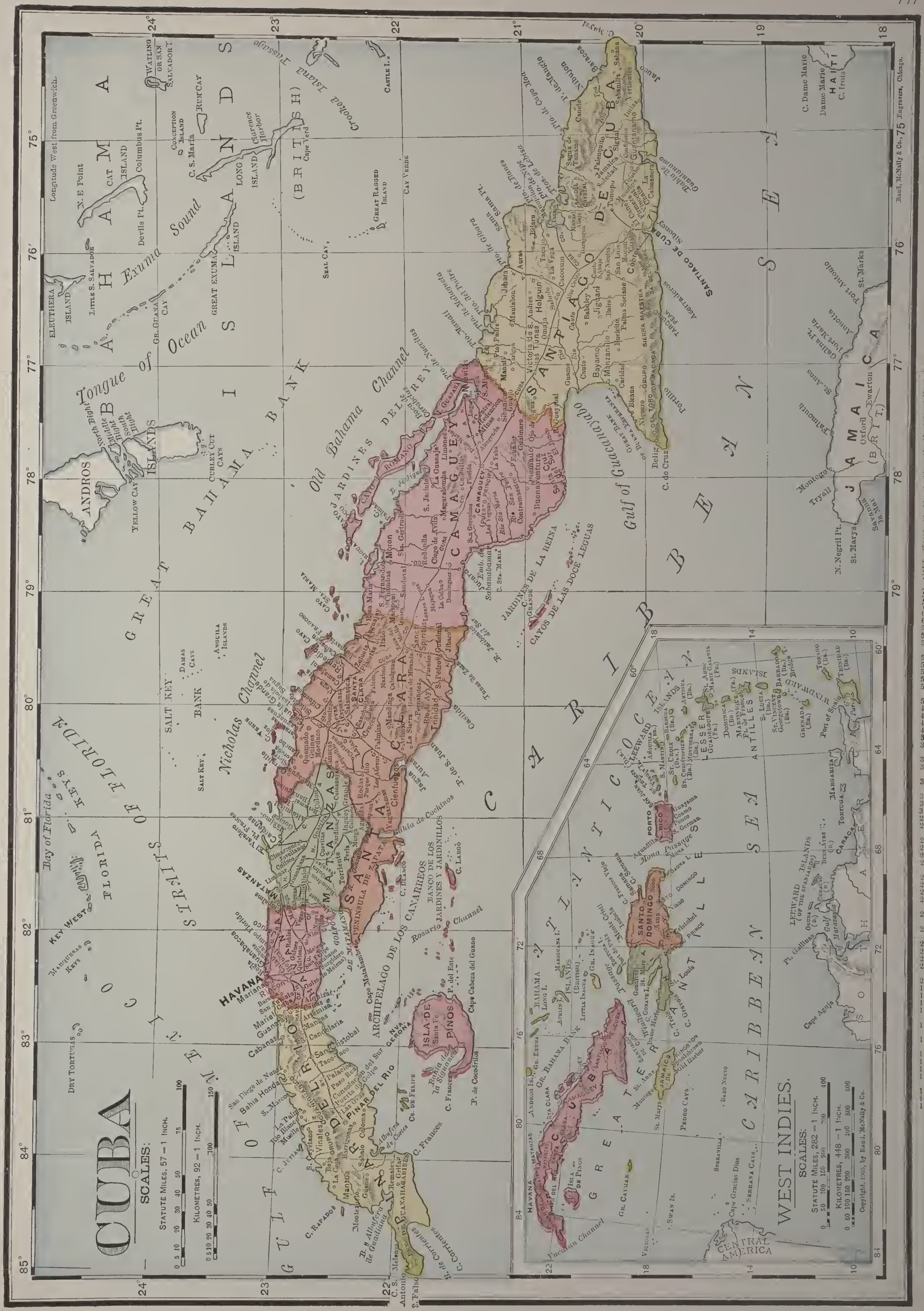
Pop.—Thousands.

26 Vancouver K 15
21 Victoria . M 15
6 New Westminster K 16
6 Rossland . K 25
6 Nanaimo K 13
5 Nelson ... K 27
2 Kaslo ..... J 27
2 Fernie.... K 31
2 Revelstoke G 25
2 Kamloops-H 21
1 Trail..... K 26
1 Greenwood K 24
1 Cranbrook K 30
1 Union .. J 11
1 Grand Forks K 24
1 Slocan City J 27

Pop.—Hundreds.

9 Phoenix .. K 24
8 Vernon .... I 23
8 Chilliwack K 18
7 Golden . G 28
6 Ladysmith K 14
6 Moyle..... K 30
6 Ladner.... K 15
6 Sandon . J 27
5 Port Moody K 16
5 Alberni ... K 12
5 Michel ... K 31
5 Ashcroft . H 19
4 Chemainus L 14
4 Steveston. K 15
4 Wellington K 13
4 New Denver J 26
4 Lytton .... I 19
4 Hastings . K 16
4 Fort Steele J 30
3 Salmon Arm H 23
3 Princeton K 21
3 Lillooet .. H 18
3 Northfield K 13
3 Port Essington.. A 3
3 North Bend J 18
3 Agassiz ... K 18
3 Hope Station K 18
3 Ymir ..... K 27
3 Barkerville C 19
3 Clayoquot K 10
3 Esquimalt M 15
2 Midway .. K 23
2 Nakusp .... I 26
2 Armstrong I 24
2 Duncan.... I 28
2 Telegraph Creek.. B 29
2 Anaconda K 24
2 Ainsworth J 27
2 Duncan's Station. L 14
2 Yale ...... J 18
2 Salmo .... K 27
2 Trout Lake H 27
2 Enderby .. H 24
2 Rivers Inlet F 6
2 East Wellington K 14
2 Sicamous. H 24
2 Clinton .. G 18
1 Cascade .. K 25
1 Hazleton . D 31
1 Field. G 29
1 Comox .... J 12
1 Three Forks J 27
1 Pilot Bay . J 28
1 Quesnel D 16
1 Langley .. K 17
1 Whitewater I 27
1 Windermere I 29
1 Lac La Hache F 19
1 Illecillewaet.. G 26
1 North Saanich. L 15
1 Nicola I 21
1 Quesnel Forks D 17
1 Fairview K 22
1 Kimberley K 30
1 Mission City. K 17





CUBA

(Republic)
Area, 44,000 sq. m.
Pop. 1,572,797

PROVINCES.

Camaguey ... G 4
Havana ...... C 3
Matanzas .... D 3
Pinar del Rio. B 3
Santa Clara.. D 3
Santiago de Cuba...... I 5

CHIEF CITIES.

Pop.—Thousands.

236 Havana ... C 2
43 Santiago de Cuba ..... K 6
36 Matanzas . D 2
30 Cienfuegos E 3
25 Puerto Principe . G 4
22 Cardenas . D 2
14 Manzanillo H 5
14 Guanabacoa C 2
14 Santa Clara F 3
13 Sagua la Grande ... E 3
13 Sancti Spiritus .. F 4
11 Regla .... C 2
11 Trinidad . E 4
9 Pinar del Rio .... B 3
8 Guines .... C 3
7 Colon .... E 3
7 Guanabacoa K 5
7 Caibarien .. F 3
7 Jibara ...... I 4
7 Remedios .. F 3
6 Guanajay .. C 2
6 Holguin .... I 5
5 Mariano .. C 2
5 Placetas ... F 3
5 Camajuani F 3
5 San Luis.... I 5
5 Melena ..... C 3
5 Baracoa... L 5
5 Bejucal ... C 3
5 Jovellanos D 3
5 Palmira.... E 3
4 Nuevitas .. H 4
4 Cruces .. E 3
4 Alquizar . C 3
4 Surgidero . C 3
3 Rodas .... E 3
3 Consolacion del Sur .. B 3
3 Bayamo... H 5
3 Ranchuelo E 3
3 Ciego de Avila. ... G 4
3 Limonar ... D 2
3 Cuevitas ... D 3
3 Bolondron D 3
2 Artemisa . C 3
2 Nueva Paz D 3
2 Sabanilla... D 3
2 Esperanza E 3
2 Moron G 3
2 Santo Domingo. E 3
2 Madruga D 3
2 Mayari.. K 5
2 Quivican . C 3
2 Palma Soriano ... I 5
2 Maximo Gomez .. D 2
2 Puerto Padre I 4
2 Cabezas.... D 3
2 Guira D 3
2 Vinales .. B 3
2 Quemado de Guines . E 3
2 Niquero.... H 5
1 Cifuentes .. F 3
1 Macagua ... E 3
1 San Felipe C 3
1 Los Abreus E 3
1 Sagua de Tanamo K 5
1 Santa Cruz del Sur .. H 5
1 Yaguajay .. F 3
1 Cristo ...... K 5
1 Jaruco .... C 2
1 San Fernando G 3
1 Santa Fe ... C 4
1 Cobre .. I 5
1 Batabano . C 3

WEST INDIES

Antigua K 26
Barbuda .. J 26
Redonda K 25
(British Colony)
Area .. 170 sq. m.
Pop. 34,971

Bahamas .B 12
(British Colony)
Area, 5,450 sq. m.
Pop. 53,735

Barbados .N 28
(British Colony)
Area ... 166 sq. m.
Pop. 198,000

Cuba .... F 9
(Republic)
Area, 44,000 sq. m.
Pop. 1,572,797

Dominica .. D 27
(British Colony)
Area ... 291 sq. m.
Pop 28,894

Grenada . P 26
(British Colony)
Area .. 133 sq. m.
Pop 64,098

Guadeloupe and Dependencies ... B 28
(French Colony)
Area .. 688 sq. m.
Pop. 182,112

Haiti .... I 15
(Franco-American Republic)
Area, 10,204 sq. m.
Pop. 1,347,140

Jamaica .. C 18
With Turks and Caicos Islands
(British Colony)
Area, 4,424 sq. m.
Pop. 785,434

Martinique F 27
(French Colony)
Area .. 381 sq. m.
Pop. 187,692

Monsterrat K 26
(British Colony)
Area .... 32 sq. m.
Pop. 12,215

Porto Rico F 24
(U.S. Territory)
Area, 3,606 sq. m.
Pop. 953,243

St. Christopher ... J 25
(St. Kitts)
Area .. 65 sq. m.
Pop. 29,782
Anguilla .. I 25
Area ... 35 sq. m.
Pop. 3,890
(British Colony)
Nevis .... J 25
Area ... 50 sq. m.
Pop. 12,774

St. Croix .. J 23
St. John .... I 23
St. Thomas I 22
(Danish Colony)
Area .. 138 sq. m.
Pop. 30,504

Saba .... J 24
(Dutch Colony)
Area ... 12 sq. m.
Pop. 3,572
St. Eustatius J 25

St. Lucia .. H 27
(British Colony)
Area .. 233 sq. m.
Pop. 49,895

St. Martin I 24
(Dutch Colony)
Area ... 17 sq. m.
Pop. 3,485
St. Martin I 24
(French Colony)
(Included in Guadeloupe and Dependencies.)

Santo Domingo ... J 16
(Dominican Republic)
(Sp.-Am. Rep.)
Area, 18,045 sq. m.
Pop. 610,000

Torago .... P 27
(British Colony)
Area .. 114 sq. m.
Pop. 21,000

Trinidad .. Q 27
(British Colony)
Area, 1,754 sq. m.
Pop. 272,000

Virgin Islands .. I 23
(British Colony)
Area ... 58 sq. m.
Pop. 4,908

CHIEF CITIES.

Pop.—Thousands.

236 Havana .. D 5
60 Port au Prince .. I 15
47 Kingston C 23
43 Santiago de Cuba ... H 11
36 Matanzas D 6
34 Port of Spain ... Q 26
32 San Juan D 22
30 Cienfuegos E 7
29 Cape Haïtien H 15
28 Ponce ... F 21
26 St. Pierre F 27
25 Camaguey F 9
25 Bridgetown N 28
25 Cayes .... I 14
25 Goâve .... I 15
25 Mirebalais I 15
25 Santo Domingo .. I 18
22 Cardenas D 6
18 Gonaïves H 15
17 Fort de France .. F 27
17 Pointe à Pitre .. B 27

Pop. Thousands.

15	Mayaguez	E 19
15	Puerto Plata	G 17
14	Manzanillo	G 10
14	Santa Clara	E 7
14	Guanabacoa	D 5
13	Sagua la Grande	E 8
13	Sancti Spiritus	F 8
13	Nassau	B 10
11	Regla	D 5
11	Trinidad	F 7
10	Charlotte Amalie	I 23
10	Port de Paix	H 15
10	St. John	J 26
9	Basse Terre	J 25
9	Pinar del Rio	E 4
8	Guines	E 6
8	Arecibo	D 20
8	Santiago	H 17
8	Castries	M 26
8	Port Castries	H 28
8	Basse Terre	C 26
7	Ste. Anne	B 27
7	Colon	E 7
7	Guantanamo	G 12
7	Caibarien	E 8
7	Morant Bay	C 24
7	Grand Bourg	C 27
7	Gibara	F 11
7	Port Maria	A 23
6	Guanajay	E 5
6	Aguadilla	D 19
6	Tripoli	A 21
6	Yauco	F 20
6	Holguin	G 11
6	Jacmel	I 15
6	Robert	F 28
5	Morne a l'Eau	B 27
5	Caguas	E 23
5	Placetas	E 8
5	Guayama	F 22
5	Camajuani	E 8
5	San Luis	G 11
5	Ste. Rose	B 26
5	Spanish Town	C 22
5	Jérémie	I 13
5	Roseau	D 27
5	Seybo	I 18
5	Baracoa	G 13
5	Bejucal	D 5
5	Montego	A 19
5	Jovellanos	E 6
5	Kingstown	N 26
4	Manati	D 21
4	Humacao	E 24
4	Nuevitas	E 10
4	Cruces	E 7
4	Retreat	A 22
4	San German	E 19
4	Le Marin	G 28
4	Cayey	E 22
4	Precheur	F 27
4	Lares	E 20
4	Utuado	E 21
3	Fajardo	E 24
3	Coamo	F 22
3	Bayamo	G 10
3	Frederichsted	J 23
3	Monte Cristi	H 16
3	Savanna la Mar	B 18
3	Ciego de Avila	F 8
3	Bouillante	B 26
3	Cabo Rojo	E 19
3	Vieques	E 24
3	Falmouth	A 20
2	Anasco	E 19
2	Artemisa	E 5
2	Vega Baja	D 21
2	Juana Diaz	F 21
2	Bayamon	E 22
2	Esperanza	E 7
2	Arroyo	F 23
2	Moron	E 9
2	San Lorenzo	E 23
2	Santo Domingo	E 7
2	Juncos	E 23
2	Madruga	E 6
2	Cotui	H 17
2	Adjuntas	E 21
2	Yabucao	F 23
2	Mayari	G 12
2	Naguabo	E 23
2	Encrucijada	E 8
2	Vinales	E 4
2	Patillas	F 23
2	Azua	I 17
2	Speightstown	N 28
1	Moca	D 19
1	Macagua	E 7
1	Diamant	G 28
1	San Felipe	E 5
1	Plymouth	K 25
1	Ciales	E 21
1	Aguas Buenas	E 22
1	Toa Baja	D 22
1	Maunabo	F 23
1	Sagua de Tanamo	G 12
1	Santa Cruz del Sur	G 9
1	Scarborough	P 28
1	Quebradilla	D 20
1	Santa Isabel	F 21
1	Jaruco	D 5
1	Penuelas	F 20
1	Rincon	E 19
1	Morovis	E 22
1	Santa Fe	F 5
1	Batabano	E 5
1	Trujillo Alto	E 23
1	Samana	H 18

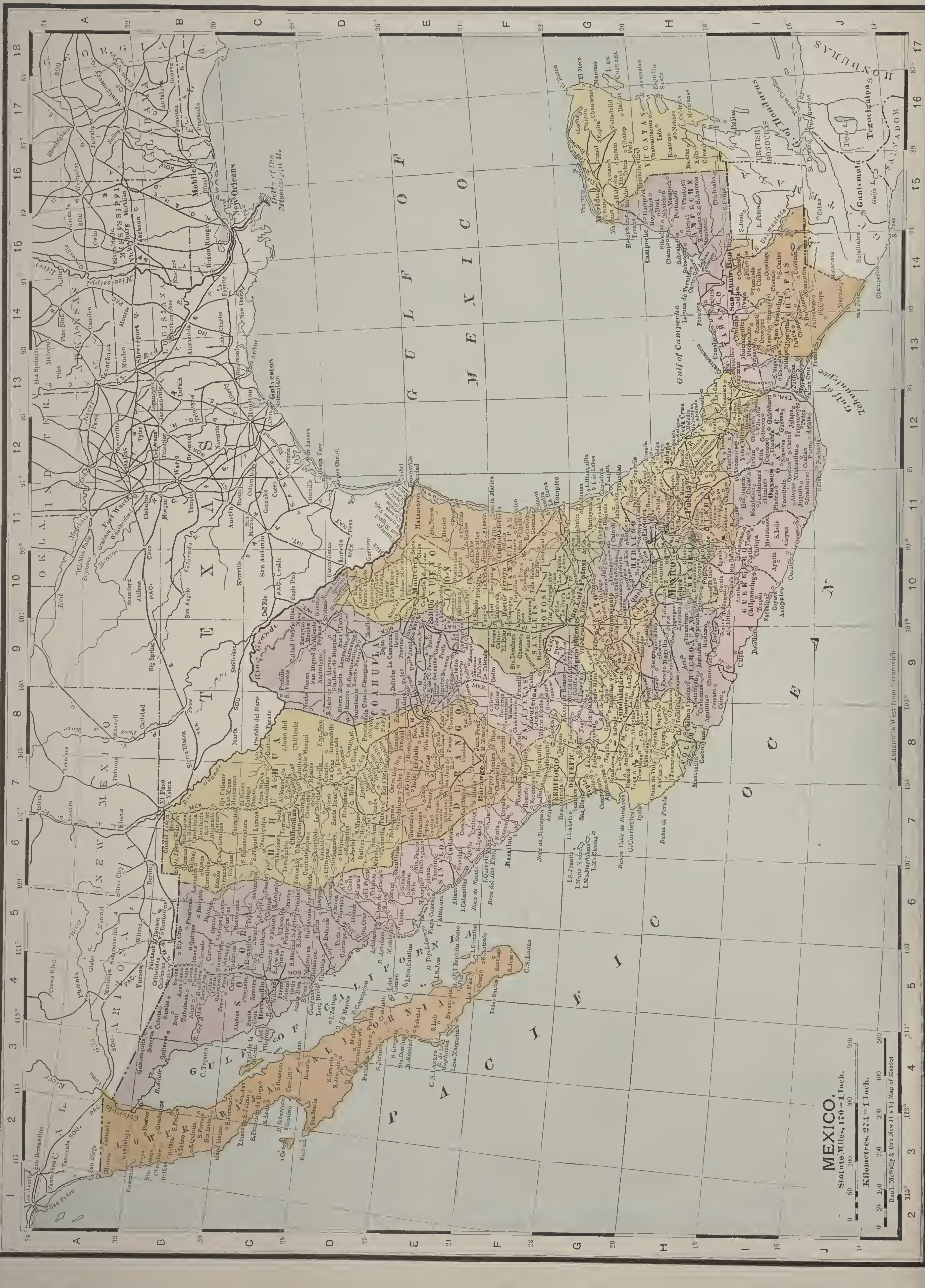
MEXICO

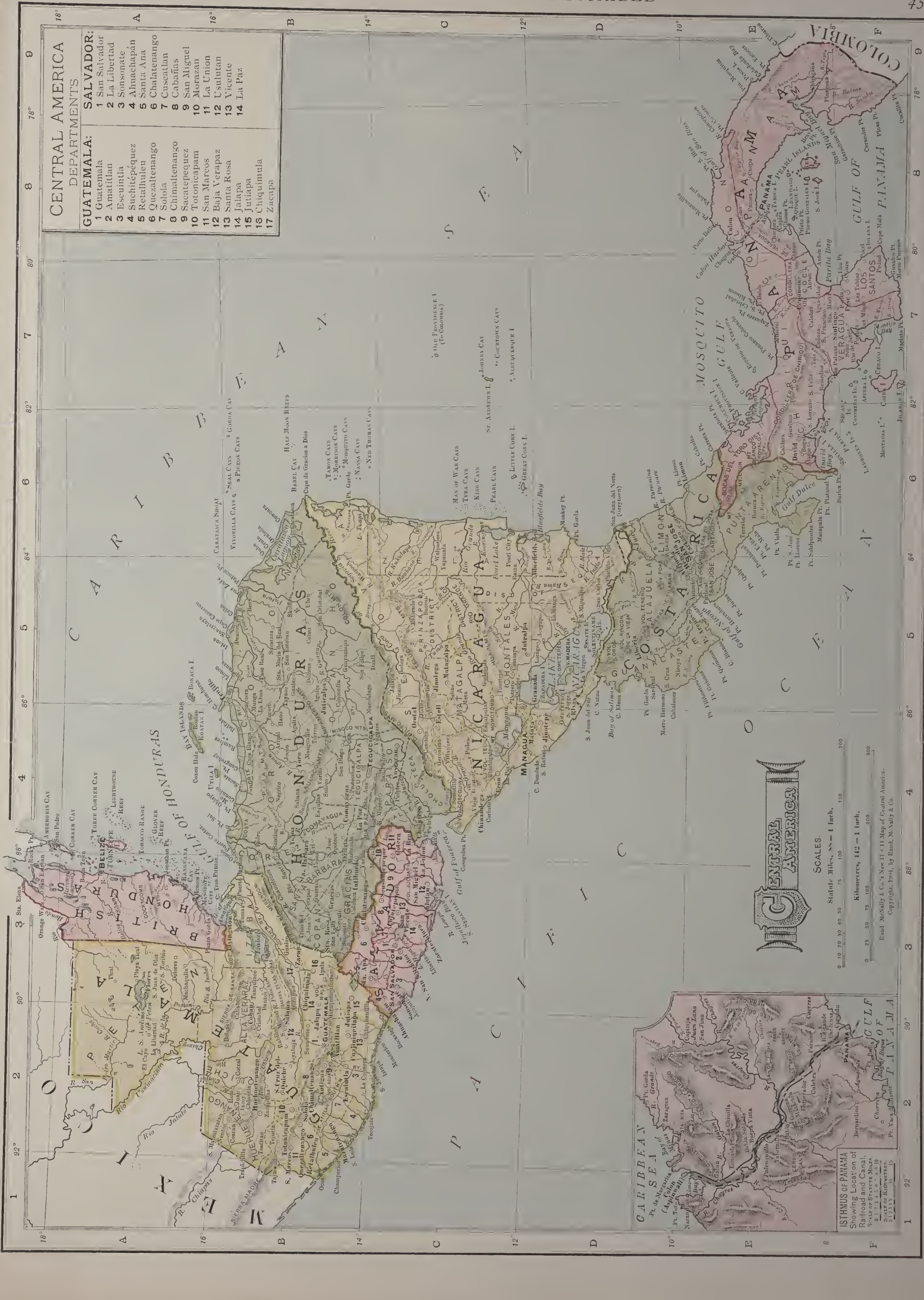
(Republic)
Area, 767,274 sq. m.
Pop. . . 13,605,819

CHIEF CITIES.

Pop.—Thousands.

315 Mexico H 10
101 Guadalajara G 8
94 Puebla. H 11
63 Leon . E 10
62 Monterey E 10
61 San Luis Potosi F 10
44 Merida . G 15
41 Guanajuato G 10
37 Pachuca . G 11
37 Morelia H 9
35 Aguascalientes . G 9
35 Oaxaca I 11
33 Queretaro G 10
33 Orizaba H 12
33 Zacatecas F 9
31 Durango E 7
30 Chihuahua C 7
29 Vera Cruz H 12
26 Toluca . . H 10
26 Celaya . . . G 10
24 Saltillo . . E 10
21 Colima . . H 8
20 Jalapa. . . H 12
20 Irapuato G 9
18 Mazatlan F 7
17 Campeche H 14
16 Tampico. F 11
16 Lagos . . . . G 9
15 Tepic . . G 7
15 Silao G 9
15 Parral . D 7
14 Matehuala F 10
14 Torreon. . . E 8
14 Salamanca G 10
13 Valle de Santiago G 9
12 Sombrerete F 8
12 Teclutlan H 11
12 Juchitan . I 13
11 Tuxtla Gutierrez. . I 13
11 Hermosillo C 4
11 San Miguel (San Miguel de Allende) G 9
11 San Juan Bautista I 14
10 Salvatierra G 9
10 Tehuantepec I 12
10 Culiacan . E 6
10 Ciudad Victoria . . F 10
10 Uruapan . H 9
10 Cuernavaca H 10
9 Jimenez. . . D 7
9 Atlixco . . H 11
9 San Pedro . D 9
9 Guadalupe F 9
9 Coatepec . H 11
8 Rosario . . F 7
8 Jerez. . . . . . F 8
8 Matamoros E 11
8 Acambaro G 9
8 Penjamo G 9
8 **Sierra Mojada** D 9
8 San Juan del Rio G 10
8 Ciudad Juarez B 6
8 Cordoba . H 12
8 Tlaxiaco . I 11
8 Ameca . . . . G 8
8 Sayula . . . . H 8
8 Autlan. . . H 7
8 Pinos. . . . . F 9
8 Patzcuaro H 9
7 Chilpancingo I 10
7 Iguala . . . . H 10
7 Chilapa . . . I 11
7 Catorce . . F 9
7 Tehuacan H 11
7 La Barca . G 9
7 Linares . . . E 10
7 Cholula . . H 11
7 Monclova D 9
7 Nuevo Laredo D 10
6 Dolores Hidalgo . . . G 10
6 Parras. . . . . E 9
6 Cedral . . . . F 10
6 Tixtla . I 10
6 Tlacotalpan H 12
6 Fresnillo . F 9
6 Matamoros H 11
6 Cuautla . . H 11
6 Yautepec . H 10
6 Zitacuaro H 10
6 Tepatitlan G 8
6 Rio Verde G 10
6 Tlacolula . I 12
6 Cocula. . . G 8
6 Ticul. . . G 15
6 Miahuatlan I 12
5 Tuxpan. . . G 11
5 Encarnacion G 9
5 Garcia . . E 10
5 Tacambaro H 9
5 La Paz. . . . E 5
5 Valladolid G 16
5 Tetela. . . H 11
5 Acapulco I 10
5 Angangueo H 10
5 Lampazos D 10
5 Tlalpam. . H 10
5 Santa Rosalia D 7
5 Viesca . . . E 9
5 Santa Rosa de Muzquiz. . D 9
5 Ometepec. I 11
4 Huetamo . H 9
4 Villaldama D 10





CENTRAL
AMERICA

HONDURAS, BRITISH
(British Colony)
Area 7,562 sq. m.
Pop. 37,479

CHIEF CITY.
Pop.—Thousands.
9 Belize . . . . . . A 3

COSTA RICA
(Spanish-American Republic)
Area 18,400 sq. m.
Pop. 243,205

CHIEF CITIES.
Pop.—Thousands.
24 San Jose . . E 5
7 Heredia . . E 5
6 Santa Cruz D 5
5 Cartago . . . . E 6
5 Alajuela . . . E 5
5 Nicoya . . . E 5
4 Puntarenas E 5
3 Limon . . . E 6
3 Liberia . . . . D 5

GUATEMALA
(Spanish-American Republic)
Area 48,290 sq. m.
Pop. 1,842,134

CHIEF CITIES.
Pop.—Thousands.
96 Guatemala B 2
30 Coban . . . . . B 2
29 Quezaltenango . . . . . B 2
28 Tontonicapam . . . . . . B 2
19 Santo Tomas B 3
14 Antigua . . B 2
11 Chimaltenango B 2
11 Chiquimula B 3
7 Salama . . . . B 2
6 Flores . . . . A 3
6 Santa Cruz del Quiche B 2
6 Jalapa . . B 2
6 Zacapulas B 2
5 Retalhulen B 2
5 Ipala . . . . . . B 3
5 Mazatenango B 2
5 Joyabajx. B 2
5 Escuintla . . B 2
5 Solola . . . . B 2
3 Zacapa . . . . . B 3
2 Sanarate . . B 2
2 Gualan . . . B 3
2 Tajamulco . B 1
2 Izabal . . . . . . B 3

HONDURAS
(Spanish-American Republic)
Area, 46,250 sq. m
Pop. 744,901

CHIEF CITIES.
Pop.—Thousands.
35 Tegucigalpa B 4
18 Juticalpa . . B 5
11 Santa Rosa B 3
11 Choluteca C 4
10 Comayagua B 4
4 Trujillo . . . . B 5
4 Yoro . . . . B 4

NICARAGUA
(Spanish-American Republic)
Area, 49,200 sq. m
Pop. 500,000

CHIEF CITIES.
Pop.—Thousands.
45 Leon C 4
30 Managua . . D 4
25 Granada . . D 5
20 Chinandega C 4
20 Masaya . . . . D 4
8 Rivas . . . . . D 5
7 Jinotepe . . . D 4
6 Acoyapo . . D 5
4 Jinotega . . . . C 5
4 Metagalpa . . C 5
2 San Juan del Norte (Greytown) . . . . . . D 6
2 Bluefields . . D 5

SALVADOR
(Spanish-American Republic)
Area, 7,225 sq. m.
Pop. 1,006,848

CHIEF CITIES.
Pop.—Thousands.
60 San Salvador C 3
48 Santa Ana B 3
25 San Miguel C 3
19 Nueva San Salvador . C 3
18 San Vicente C 3
17 Sonsonate C 3
8 Ahuachapam C 3
4 Usulutan C 3
3 La Union . . . C 3

PANAMA

(Republic)

Area 31,570 sq.m.
Pop........ 340,000

DEPARTMENTS.

Chiriqui .... B 9
Cocle.......... C 9
Colon.......... D 8
Los Santos... C 9
Panama ...... E 8
Veragua ...... C 9
Bocasdel Turo District . B 8

CHIEF CITIES.

Pop. – Thousands.

30 Panama... D 5
13 Colon ..... B 2
9 David ...... B 8
6 Chorrera .. C 5
6 Santiago ... C 9
5 Chepo....... G 3
5 Los Santos C 9
3 Emperador C 4
3 Porto Bello D 1
2 Matachin .. C 4
2 Gorgona.... C 4
2 Penonome.. C 8
2 Pesé .... C 9
2 San Pablo C 4
2 Chame..... B 7
1 Gatun ...... B 3
1 Capira....... B 6

Pop. – Hundreds.

8 Paraiso .. D 4
7 Remedios .. C 9
6 Chipigana .. E 8
4 Obispo .. C 4
4 Bohio Soldado B 3
4 Cananza ... C 9
2 Chagres ... B 3
2 Lion Hill .. B 3
2 Tavernilla . C 4
1 Miraflores .. D 4
1 Rio Grande D 4
Agua Clara .. B 3
Aguadulce .. C 9
Agua Sucia .. C 3
Ahorca Lagarto B 3
Alanje .... B 8
Alhajuela.... D 3
Anton .... C 8
Araijan ...... C 5
Belen.......... C 8
Bruja .... B 3
Buena Vista. C 3
Bugaho ...... B 8
Caldera ...... B 8
Calobre ...... C 9
Catun .... C 3
Chagres ..... D 3
Chagresito... C 3
Chipigana ... E 8
Corozal ...... D 5
Cruces .... C 4
Culebra ...... C 4
Dos Bocas ... D 3
Frijoles ...... C 3
Gamboa ...... C 4
Gualaca .... B 8
Jesus Maria. H 4
Juan Diaz ... E 4
Juan Grande. C 4
La Boca...... D 5
Lagartere.... B 4
Lagarto ...... A 3
La Sabana ... D 5
Las Minas .. C 9
La Soledad ... C 3
Las Palmas.. C 9
Las Tablas.. D 9
Lion Hill..... B 3
Mamel ...... C 4
Manzanillo .. D 1
Mineral ..... C 8
Miraflores ... B 3
Miraflores .. D 4
Monkey Hill B 2
Monte Liria. C 3
Ola .... C 8
Pacora .... F 4
Palenque .... F 1
Palo Horqueta B 3
Parita .... C 9
Pedasi....... C 9
Pedro Miguel D 4
Pena Blanca. B 3
Pinagona .... E 9
Pocri......... D 9
Ponuga...... C 9
Rio Cidra ... E 1
Rio de Jesus C 9
Rio Grande D 4
Rio Pina ..... A 3
San Alejo ... C 2
San Felix .... B 8
San Francisco C 9
San Juan .... D 3
San Lorenzo. B 8
Santa Barbara E 3
Santa Maria.. C 9
Santana ..... B 3
Santa Rita . C 3
Saragosa..... B 2
Sona .... C 9
Taboga ...... D 6
Tapadero .... G 3
Tiger Hill... B 3
Tole .... C 9
Village....... H 2

SOUTH AMERICA

Argentine Republic E 10 (Spanish-American Republic) Ar. 1,135,840 sq. m. Pop. 5,160,986

Bolivia ..... E 6 (Spanish-American Republic) Ar. 703,400 sq. m. Pop. 1,816,271

Brazil ..... G 5 (Portuguese Republic) Ar. 3,218,130 sq. m. Pop. 14,333,915

Chile ......D 11 (Spanish-American Republic) Ar. 307,620 sq. m. Pop. 2,712,145

Colombia ..D 3 (Spanish-American Republic) Ar. 473,202 sq. m. Pop. 3,916,666

Ecuador....D 4 (Spanish-American Republic) Ar. 116,000 sq. m. Pop. 1,205,600

Guiana (British) H 3 (British Colony) Area, 90,500 sq. m. Pop. ..... :278,328

Guiana (French) G 8 (French Colony) Area, 30,500 sq. m. Pop. 32,910

Paraguay .G 8 (Spanish-American Republic) Area 157,000 sq. m. Pop. 530,103

Peru ....C 6 (Spanish-American Republic) Ar. 695,733 sq. m. Pop. 2,660,881

Surinam (Dutch Guiana)....G 3 (Dutch Colony) Area, 46,060 sq. m. Pop. 72,295

Uruguay..G 10 (Spanish-American Republic) Area, 72,210 sq. m. Pop. 978,072

Venezuela E 2 (Spanish-American Republic) Ar. 593,913 sq. m. Pop. 2,323,527

South America

COLOMBIA

(Spanish-American Republic)
Area 473,202 sq m.
Pop......3,916,666

DEPARTMENTS

- ANTIOQUIA . B 4
  Area 22,316 sq. m.
  Pop........464,887
- BOLIVAR B 3
  Area 21,345 sq. m.
  Pop. .. 323,097
- BOYACA, ...D 4
  Area 33,351 sq. m.
  Pop........508,940
- CAUCA .....C 6
  Area 257,462 sq. m
  Pop. 800,000
- CUNDINAMARCA D 5
  Area 79,810 sq. m.
  Pop.. 537,658
- MAGDALENA C 3
  Area 24,440 sq m.
  Pop.........127,000
- SANTANDER . C 4
  Area 16,409 sq. m.
  Pop.........550,399
- TOLIMA .....B 5
  Area 18,069 sq. m.
  Pop 305,185

CHIEF CITIES.

Pop.—Thousands.

- 120 Bogota ...C 5
- 40 Barranquilla C 2
- 40 Medellin...B 4
- 20 Bucaramanga C 4
- 20 Cartagena. B 2
- 16 Socorro ...C 4
- 13 Chiquinquira C 4
- 12 Palmira ...B 5
- 12 Obaque ...B 5
- 12 Sonson ....B 4
- 11 Ipiales ....A 6
- 10 Popayan ..B 6
- 10 Ambaleuia C 5
- 9 Rionegro ...B 4
- 9 Aguadas ....B 4
- 9 Antioquia ..B 4
- 9 Yarumal ..B 4
- 9 Espinal ....C 5
- 8 Pamplona ..C 4
- 8 Tunja.......C 4
- 8 Velez ......C 4
- 8 Salamna....B 4
- 7 Chaparral ..B 5
- 7 Ubate ......C 4
- 7 Pasto ......B 6
- 7 Quibdo ....B 4
- 7 Remedios ..C 4
- 7 Buga. ....B 5
- 6 Chinu .....B 3
- 6 Ocana ....C 3
- 6 Tocalma ..C 5
- 6 Santa Marta C 2
- 6 Almaguer ..B 6
- 6 Marinilla ..B 4
- 6 Barhacoas..A 6
- 5 Labranza-grande .... D 4
- 5 Valle Dupar C 2
- 4 Quilichao ..B 5
- 4 Buenaventura B 5
- 4 Riohacha . C 2
- 3 Magangue. .C 3
- 3 Tolu ....B 3
- 3 Yaguara....B 5
- 3 Zaragoza B 4
- 3 Anserma Viejo B 5
- 2 Medina .....C 5
- 2 Arauca ....D 4

VENEZUELA

(Spanish-American Republic)
Ar., 593,943 sq. m.
Pop......2,323,527

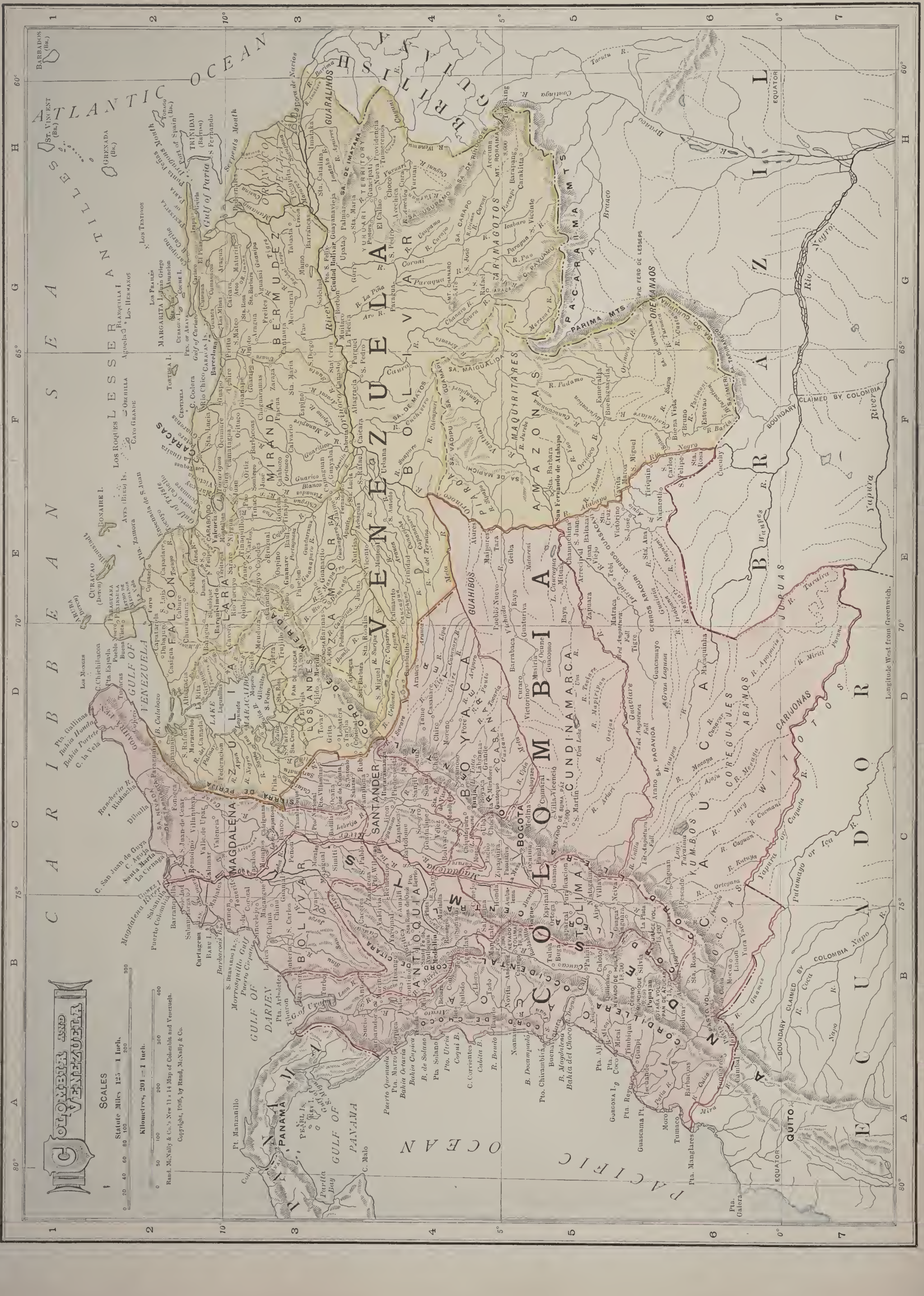
DEPARTMENTS

- AMAZONAS . F 5
- BERMUDEZ ..G 3
  Area, 32,243 sq m
  Pop........300,597
- BOLIVAR.... F 4
  Area, 88,701 sq. m
  Pop..........50,289
- CARABOBO ..E 2
  Area, 2,984 sq. m.
  Pop........198,021
- FALCON AND ZULIA......E 2
  Ar , 36,212 sq. m.
  Pop........224,566
- FEDERAL DIST.
  Area,...45 sq. m.
  Pop..........89,133
- LARA.........E 2
  Area, 9,296 sq. m.
  Pop........246,760
- LOS ANDES..D 3
  Area, 14,719 sq. m
  Pop........336,146
- MIRANDA ....F 3
  Area, 33,969 sq. m
  Pop........481,509
- TERRITORIES
  Ar., 350,562 sq. m
  Pop. 140,930
- ZAMORA.......E 3
  Area, 25,212 sq. m
  Pop.. 246,676

CHIEF CITIES.

Pop —Thousands.

- 72 Caracas ...F 2
- 39 Valencia ..E 2
- 34 Maracaibo D 2
- 31 Barquisimeto E 2
- 15 Tocuyo ....E 2
- 14 Marturin ..G 3
- 14 La Guaira .F 2
- 13 Barcelona G 2
- 12 Cura...... E 2
- 12 Merida ...D 3
- 12 San Cristobal D 3
- 12 Guanarito. E 3
- 12 Ciudad Bolivar G 3
- 11 Guanare. E 3
- 10 San Carlos E 3
- 10 Baul ......E 3
- 10 Araure ....E 3
- 10 Cumana .G 2
- 9 Carupano ..G 2
- 8 Puerto Cabello E 2
- 8 Nirgua .... E 3
- 8 Moracay E 2
- 8 Quibor .. E 3
- 7 Ocumare ...F 2
- 7 Cariaco.....G 2
- 7 Aragua.... G 3
- 6 San Felipe .E 2



BRAZIL

(Portuguese Republic.)
Ar. 3,218,130 sq m
Pop. .. 14,333,915

CHIEF CITIES.

Pop.—Thousands.

523 Rio de Janeiro..... I 13
174 Bahia (San Salvador) K 9
112 Pernambuco L 7
65 Sao Paulo H 13
59 Ouro Preto I 12
52 Porto Alegre I 16
50 Para (Belem) G 4
42 Pelotas F 16
41 Ceara (Fortaleza) ....K 5
40 Blumenau G 14
40 Campos J 12
35 Campinas G 15
35 Santos.... H 13
29 Maranhao I 4
19 Parahiba .. L 6
18 RioGrandedo Sul ... ...F 16
15 Alagoas .. L 7
15 Barbacana I 12
15 Cachoeira K 9
15 Cuyaba D 10
15 Matto Grosso B 10
14 Macero ....L 7
13 Araxa....H 11
13 Goyanna .. L 6
12 Curitiba..G 14
12 Diamantina I 13
12 Itajahy ..G 14
12 Penedo....L 8
10 Jacobina ..J 8
10 Alcantara . I 4
10 Bagagem G 11
10 Braganca H 13
10 Caxias .....I 5
10 Diamentino D 9
10 Itú ....H 13
10 Natal..... L 6
10 Rio Pardo J 10
8 Conceicao . I 11
8 Rio Bonito .J13
8 ParanaguaG 14
7 Castro.....F 13
7 Goyaz.....F 10
7 Ico..........K 6
7 Santarem..K 9
7 Therezina ..I 6
6 Campanha H 12
6 Casero .. F 13
6 Compluas H 13
6 Antonina..G 14
6 Aracaty....L 5
6 Manaos....B 5
6 Bernardo ..K 5
6 Braganca ..H 4
7 Crato ....A 6
6 Desterro ..G 15
6 Jaguarao .E 16
6 Manaos ....B 5
6 Oeiras ......J 6
6 Porto CalvoL 7
5 Bom Fim ..I 12
5 Campo Major J 5
5 Caravellas K 11
5 Crixas......F 9
5 Lancoes . ..J 8
5 Pilão Arcado J 8
5 Uba... ....J 12
5 Victoria ..K 12
4 Cavalcanti G 9
4 Itabira ....J 11
4 Melgaco....F 4
4 MonteAlegre E 4
4 Viana ....I 5
3 Casa Branca H 12
3 Brejo ....I 5
3 Campo Largo I 8
3 Estancia ...L 8
3 Minas Novas J 10
3 Porto das Pedras L 7
3 Ubatuba.. I 13
3 Valenca K 9
3 Alemquer D 4
3 Capella ..L 8
2 Barcellos ..A 4
2 S. Jose de Mipibu L 6
2 Abrantes ..L 9
2 Arraias ....H 9
2 Cameta.....G 4
2 Lages .....F 15
2 Sorocaba..H 13
2 Theresapolis G 15
1 Apiahy G 13
1 Leopoldina J 12
1 Pocone....D 10

BRITISH GUIANA

(British Colony)
Area,90,590 sq m.
Pop 278,328

CHIEF CITIES.

Pop. Thousands

53 Georgetown C 1
2 Hope Town C 1

FRENCH GUIANA

(French Colony
Area,30,500 sq.m.
Pop 32,910

CHIEF CITY.

Pop.—Thousands.

13 Cayenne ...F 2

DUTCH GUIANA (SURINAM)

(Dutch Colony)
Area,16,060 sq.m.
Pop 72,295

CHIEF CITY.

Pop.—Thousands.

32 Paramaribo D 1

ARGENTINE REPUBLIC

(Spanish American Republic)

Ar. 1,135,840 sq m
Pop. ... 5,160,986

CHIEF CITIES.
Pop.—Thousands.

664 Buenos Aires D 4
92 Rosario... C 4
48 Cordoba C 4
45 La Plata.. D 4
34 Tucuman B 3
28 Mendoza . B 4
24 Parana C 4
22 Sante Fe. C 4
17 Salta B 2
16 Corrientes D 3
15 Chivilcoy . C 4
13 Gualeguaychu D 4
13 San Nicolas C 4
12 Concordia. D 4
11 Rio Cuarto C 4
10 San Juan B 4
10 San Luis B 4
10 Pergamino C 4
10 Santiago del Estero ... C 3
9 Azul .... D 5
9 Mercedes.. D 4
9 Bahia Blanca C 5
8 Victoria ...D 4
8 Gualeguay . D 4
7 Catamarca. B 3
7 Tandil .. D 5
7 Dolores . . D 5
6 Concepcion del Uruguay ...D 4
6 Rioja . .....B 3
6 San Fernando D 4
6 Goya ....D 3
6 Chascomus. D 5
6 Zarate......D 4
5 La Paz .....D 4
5 Campana...D 4
5 Mercedes...D 3
5 Lujan.......D 4

CHILE

(Spanish-American Republic)

Ar., 307,620 sq. m
Pop......2,712,145

CHIEF CITIES.
Pop.—Thousands.

256 Santiago A 4
122 Valparaiso A 4
40 La Concepcion A 5
33 Talca......A 5
33 Iquique ...A 2
29 Chillan .. .A 5
16 Coquimbo A 3
16 La Serena A 3
14 Antofagasta A 2
13 Curico.....A 4
11 San Felipe A 4
9 Tacna ......A 1
9 Copiapo ....A 3
9 Quillota.... A 4
9 Cauquenes .A 5
8 Valdivia....A 5
8 Mulchen....A 5
8 Los Anjeles A 5
8 Los Andes..A 4
7 San Fernando A 4
7 Linares.....A 5
7 San Carlos..A 5
7 Temuco....A 5
7 Augol ......A 5
7 Rancagua ..A 4
7 Constitucion A 5
6 Limache Alto A 4
6 Parral......A 5
6 Reugo ......A 4
6 Tome .....A 5
5 Ovalle ..... A 4
5 San Bernardo A 4
5 Vallenar....A 3
5 Talcahuano A 5
5 Taltal. ... A 3
5 Illapel . ...A 4
5 Molina ... .A 4
4 Pisagua....A 1
4 Collipulli...A 5
4 Lota . ...A 5
4 Arica.......A 1
4 Vicuna ..A 3
3 Puerto Montt A 6
3 Yumbel ....A 5
3 Melipilla . .A 4
3 Ancud......A 6

PARAGUAY

(Spanish-American Republic)

Ar., 157,000 sq m
Pop. 530,103

CHIEF CITIES.
Pop. Thousands.

45 Asuncion. D 2
25 Villa Rica. D 3
15 Villa Concepcion .... ..D 2
10 Paraguari D 3
10 Villa del Pilar D 3
9 Caazapa....D 3
8 Luque .....D 2
8 San Pedro .D 2
7 San Estonislao D 2
5 Ita . ...D 3

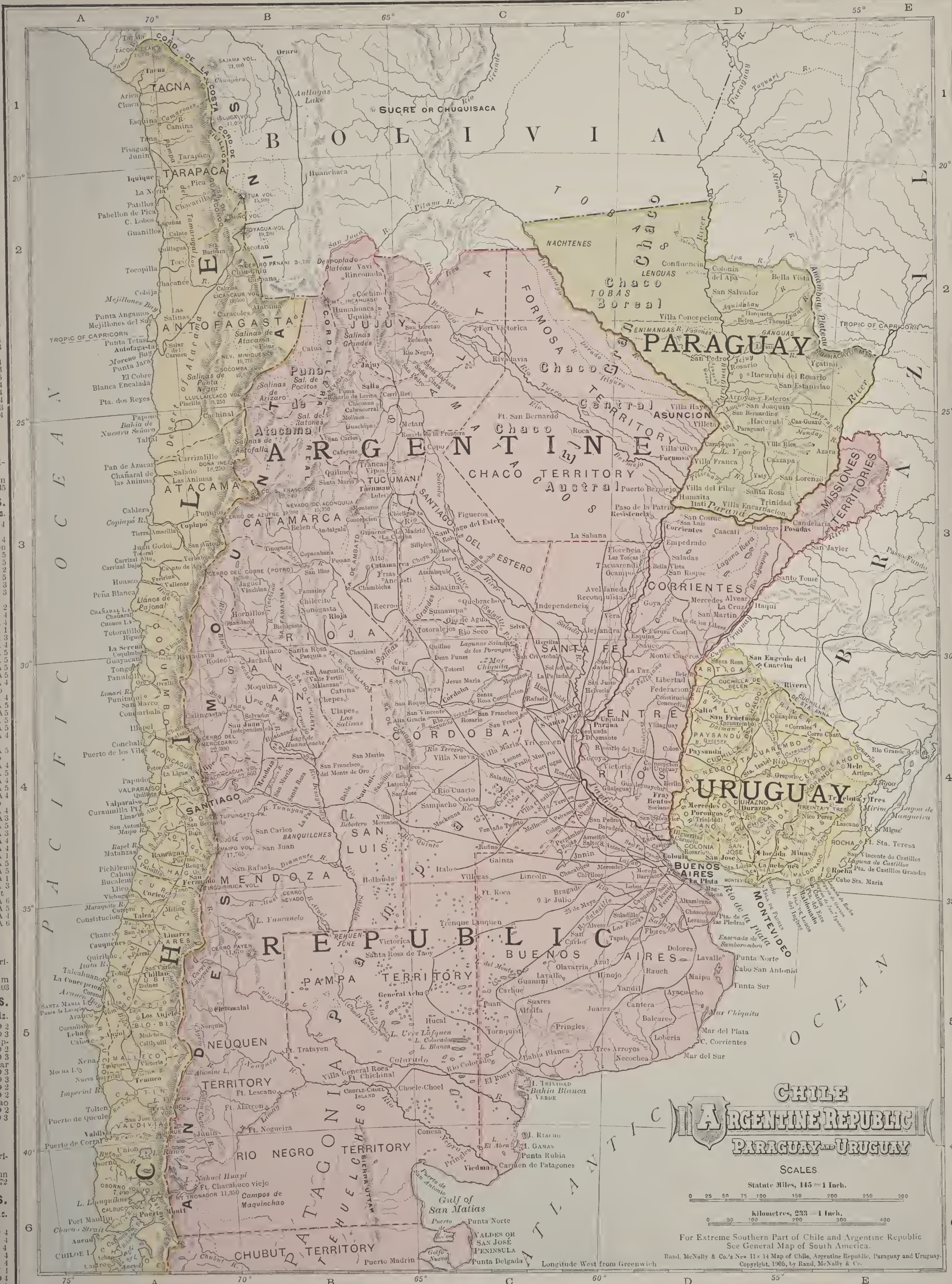
URUGUAY

(Spanish-American Republic)

Area, 72,210 sq m
Pop.. 978,072

CHIEF CITIES.
Pop.—Thousands.

252 Montevide D 4
26 Paysandu..D 4
15 Salto .....D 4
10 Mercedes .D 4
10 San Jose .D 4
8 Rocha .....E 1
7 Santa Lucia D 4
6 Maldonado. E 4



ECUADOR

(Spanish American Republic)

Ar., 116,000 sq. m
Pop. 1,205,600

CHIEF CITIES.

Pop.—Thousands.

80 Quito .... B 2
51 Guayaquil B 3
30 Cuenca B 3
18 Riobamba B 2
10 Ambato. B 2
10 Ibarra . B 1
10 La Tacunga B 2
10 Loja B 3
6 Alausi . B 3
6 Zaruma . B 3
4 Esmeraldas B 1
2 Archidona C 2

PERU

(Spanish American Republic)

Ar., 695,733 sq. m.
Pop. 2,660,881

CHIEF CITIES.

Pop.—Thousands.

130 Lima .. C 8
35 Arequipa F 10
20 Cuzco . E 8
18 Concepcion D 7
16 Callao . C 8
15 Jauja D 7
12 Cajamarca B 5
11 Chiclayo B 5
10 Moyobamba C 5
8 Huancavelica D 8
8 Trujillo .. B 6
7 Ica. .... D 9
6 Cerro de Pasco C 7
6 Acari ... D 9
6 Chachapoyas C 5
6 Lambayeque A 5
6 Moquegua F 10
6 Puno ..F 9
6 Tarma . D 7
5 Tarapota C 5
5 Huanuco C 6
5 Motupe . B 5
5 Chincha Alta C 8
5 Camana . E 10
4 Maras . E 8
4 Pampacolca E 9
4 Huacho ....C 7
4 Huanta ....D 8
4 Eten ..... B 5
3 Lamas .... C 5
3 Saposoa... C 5
3 Pisco . .C 8
3 Ayaviri .. F 9
2 Corongo B 6
2 Andahuaylas E 8
2 Llata .... C 6
2 Otuczo ....B 5
2 Sicuani . F 9
2 Olmos . B 5
2 Oyolo E 9
2 Huaraz C 6
2 Casma B 6
2 Ascope B 5
2 Pomabamba C 6
2 Guadalupe B 5
2 Asangaro . F 9
2 Ayacucho . D 8
2 Pausa .... E 9
2 Huari . .C 6
2 Cajatambo. C 7
2 Chota ......B 5
2 Chaucay C 7
2 Cerro Azul C 8
2 Acobamba D 8
2 Urubamba . E 8
2 Torata ... F 10
1 Lampa......F 9
1 Chiquian ...C 7
1 Lupe ....C 7
1 Cauete . C 8
1 Mollendo . E 10
1 Sihuas .. C 6
1 Lamud .....B 5
1 Calca .. .E 8
1 Ocoma . E 10
1 Llama .....B 5
1 Niepos... .B 5
1 Viru. .... B 6
1 Abancay . E 8
1 Huaucabamba B 4
1 Pucara F 9
1 Huancane .G 9
1 Huacrachuco C 6
1 Challhuanca E 9
1 Matucana C 8
1 Huauca Sancos D 8
1 Pacasmayo B 5
1 Juli ....G 10
1 Huariaca C 7
1 Yanacoa ...F 9

Pop. — Hundreds.

1 Pampas D 8
1 Huaura ...C 7
1 Santa Cruz D 4

BOLIVIA

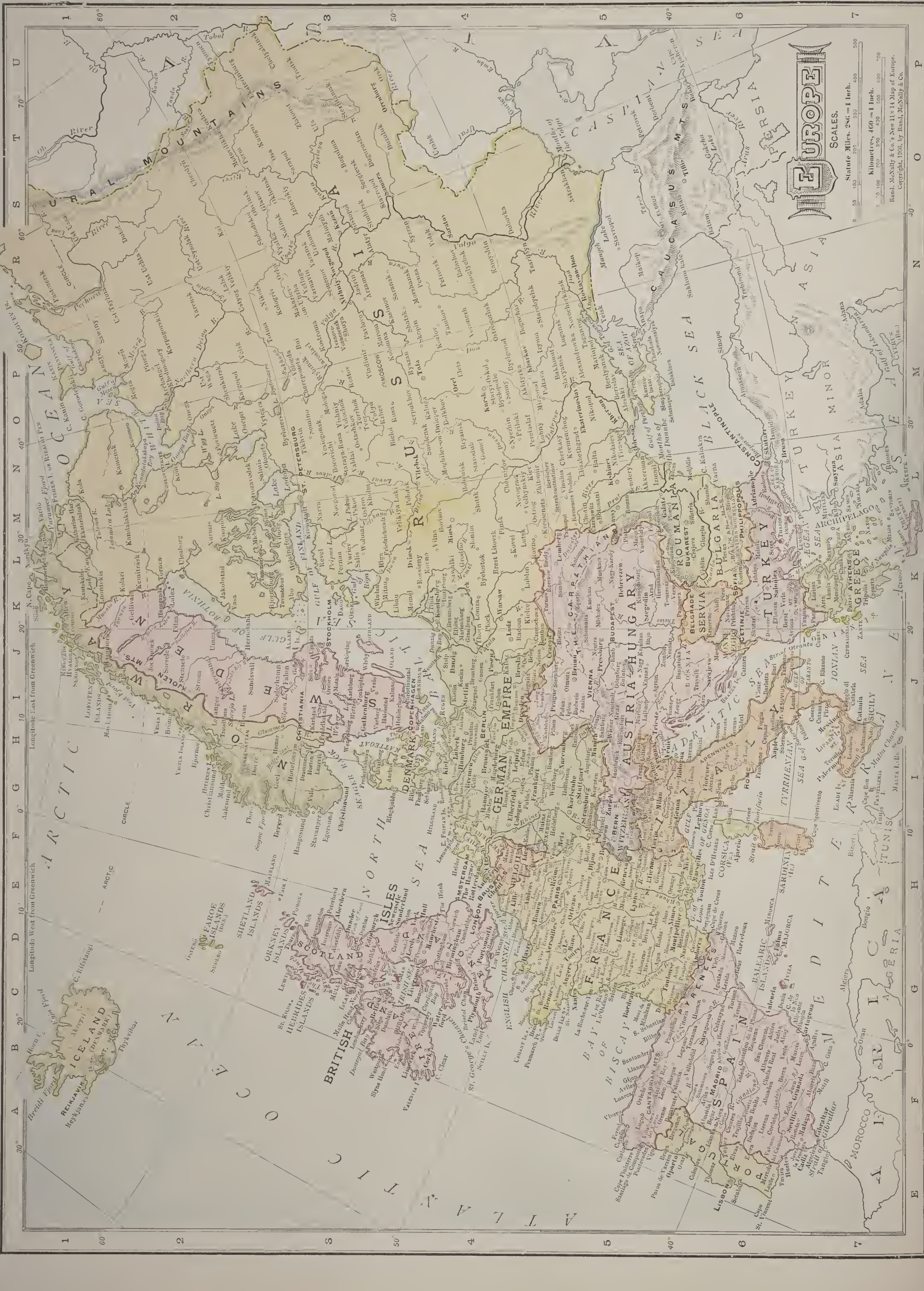
(Spanish American Republic)

Area, 703,400 sq. m
Pop 1,816,271

CHIEF CITIES.

Pop. – Thousands.

60 La Paz.... H 10
22 Cochabamba H 10
21 Potosi ... I 11
21 Sucre (Chuquisaca) ... I 11
18 Santa Cruz J 10
16 Oruro.....H 10
7 Tarija......I 12
4 Trinidad ....I 9



EUROPE

ANDORRA . G 5
(Republic)
Area 175 sq. m.
Pop. 6,000

AUSTRIA-HUNGARY ..J 4
(Monarchy)
Ar., 241,333 sq. m.
Pop.....46,952,863

BELGIUM....G 3
(Kingdom)
Area, 11,373 sq. m.
Pop. 6,744,532

BRITISH ISLES
(Kingdom) E 3
Ar., 121,391 sq. m.
Pop.....42,789,552

BULGARIA ..K 5
(Principality)
Area 38,000
Pop. 3,744,283

DENMARK.. H 2
(Kingdom)
Area, 15,388 sq. m.
Pop.......2,464,770

FRANCE.....G 4
(Republic)
Ar., 207,054 sq. m.
Pop.....38,961,945

GERMANY...I 3
(Empire)
Ar., 208,830 sq. m.
Pop.....56,345,014

GIBRALTAR .E 6
(Colony)
Area 1 9-10 sq. m.
Pop. 26,830

GREECE.....K 6
(Kingdom)
Area, 25,014 sq. m.
Pop......2,433,806

ICELAND ....C 1
(Danish Colony)
Area, 39,756 sq. m.
Pop. 78,470

ITALY. ...I 5
(Kingdom)
Ar., 110,659 sq. m.
Pop.....32,475,253

LUXEMBURG H 4
(Grand Duchy)
Area ..998 sq. m.
Pop. 217,583

MONACO.....H 5
(Principality)
Area....8 sq. m.
Pop. 15,180

MONTENEGRO J 5
(Principality)
Area, 3,630 sq. m.
Pop. 228,000

NETHERLANDS
(The)..H 3
(Kingdom)
Area, 12,648 sq. m.
Pop. 5,104,137

NORWAY ..I 1
(Kingdom)
Ar., 124,130 sq. m.
Pop.... 2,240,032

PORTUGAL ..E 6
(Kingdom)
Area, 35,490 sq. m.
Pop......5,423,132

ROUMANIA..L 5
(Kingdom)
Area, 50,700 sq. m.
Pop......5,956,690

RUSSIA......N 2
(Empire)
Area,
2,095,616 sq. m.
Pop....106,264,136

SAN MARINO H 5
(Republic)
Area ...38 sq. m.
Pop. 11,002

SERVIA. ....K 5
(Kingdom)
Area, 18,630 sq. m.
Pop.......2,492,882

SPAIN ......F 5
(Kingdom)
Area,
197,670 sq. m.
Pop.....18,618,086

SWEDEN.....J 1
(Kingdom)
Ar., 172,876 sq. m.
Pop......5,136,441

SWITZERLAND
H 4
(Republic)
Area, 15,976 sq. m.
Pop. 3,315,443

TURKEY ...K 5
(Empire)
Area, 65,350 sq. m.
Pop.......6,130,200

BRITISH ISLES.

(Kingdom)
Area, 121,391 sq m
Pop. 42,789,552

DIVISIONS

ENGLAND AND WALES
Area, 58,321 sq m
Pop. 33,763,431

IRELAND
Area, 32,360 sq m
Pop. 4,398,462

SCOTLAND
Area, 30,105 sq m
Pop. 4,627,656

CHIEF CITIES.

Pop.—Thousands.

4536 London. . M 9
685 Liverpool K 7
544 Manchester L 7
522 Birmingham L 8
429 Leeds. . . . . L 7
381 Sheffield . L 7
349 Belfast. . G 6
329 Bristol . . . K 9
316 Edinburgh J 5
289 Dublin. . . . G 7
280 Bradford . L 7
267 Westham . N 9
241 Hull. . . . . . M 7
240 Nottingham L 8
221 Salford. . . K 7
215 Newcastle-on-Tyne. . . . L 6
212 Leicester. . L 8
189 Portsmouth M 10
168 Bolton. . . K 7
164 Cardiff. . . . J 9
161 Dundee. . . J 1
153 Aberdeen. L 4
147 Sunderland L 6
137 Oldham. . . L 7
131 Croydon. . N 9
128 Blackburn K 7
123 Brighton M 10
115 Willesden M 9
111 Ystrad-y-Fodwg. . . . . . J 9
113 Preston . . K 7
112 Norwich . O 8
111 Birkenhead J 7
110 Gateshead L 6
108 Plymouth J 10
106 Derby. . . . . L 8
105 Halifax . . . L 7
105 Southampton L 10
103 Tottenham N 9
97 South Shields L 6
97 Burnley. . . . K 7
96 Greenwich N 9
95 Huddersfield L 7
95 Swansea. . . . I 9
94 Wolverhampton . . . . K 8
91 Middlesborough. . . . M 6
87 Northampton. . . . . . . L 8
86 Walsall . . . L 8
83 Rochdale . K 7
79 Paisley . . . I 5
79 Stockport K 7
78 York. . . . . . M 7
76 Govan . . . . I 5
76 Cork . . . . . . E 9
72 Reading . . . L 9
70 Coventry . L 8
70 Devonport I 10
69 Merthyr Tydfil . . . J 9
68 Greenock. H 5
67 Newport . . J 9
67 Ipswich . . . O 8
66 Hastings . N 10
55 West Bromwich. . . . . L 8
64 Warrington K 7
63 Grimsby . . M 7
63 West Hartlepool. . . . . M 6
62 Hanley . . . L 8
61 Wigan . . . K 7
59 Bootle . J 7
58 Bury. . . . K 7
58 Barrow in Furness . J 7
54 Rotherham L 7
52 Tynemouth L 6
51 Stockton-on-Tees . . . L 6
51 Great Yarmouth . . . . . O 8
50 Burton-on-Trent . . . . . L 8
50 Bath K 9
49 Cheltenham L 9
49 Oxford . L 9
49 Dudley K 8
49 Lincoln M 7
48 Southport J 7
48 Gloucester K 9
47 Blackpool J 7
47 Bournemouth L 10
47 Exeter . . . J 10
47 Worcester K 8
45 Carlisle . J 6
45 Swindon. . L 9
44 Darlington L 6
43 Aberdare . . J 9
43 Eastbourne N 10
43 Accrington K 7
42 Crewe. . K 8
42 Dover . . . . O 9
42 Keighley K 7
42 Wakefield. . L 7
41 Barnsley . . . L 7
41 Chatham. . . N 9
40 Lancaster K 7
40 Leigh. . . . . K 7
40 Londonderry F 6
39 Gillingham K 10
39 Burslem. K 8
38 Cambridge N 8
38 Colchester N 9
38 Scarborough M 6
38 Limerick. E 8
36 Luton. . . . . . M 9
36 Chester. . . K 7
36 Longton . . . L 8
35 Bedford. . . M 9

IRELAND

(Kingdom)
Area, 32,360 sq. m.
Pop. 4,398,162

PROVINCES.

CONNAUGHT G 2
Area, 6,845 sq. m.
Pop. 646,932
LEINSTER . G 5
Area, 7,626 sq. m.
Pop. 1,152,829
MUNSTER . . H 2
Area, 9,521 sq. m.
Pop. 1,076,188
ULSTER F 5
Area, 8,559 sq. m.
Pop. 1,582,826

COUNTIES.

ANTRIM . . . F 6
Area, 1,237 sq. m.
Pop. . .545,270
ARMAGH . F 6
Area 512 sq. m.
Pop. . .125,392
CARLOW . H 5
Area 349 sq. m.
Pop. ...37,748
CAVAN ....G 5
Area 746 sq. m.
Pop. 97,541
CLARE . H 3
Area, 1,332 sq. m.
Pop. . ..112,334
CORK ....I 3
Area, 2,890 sq. m.
Pop. ..404,611
DONEGAL F 4
Area, 1,870 sq. m.
Pop. 173,722
DOWN .....F 7
Area .957 sq. m.
Pop. 205,889
DUBLIN G 5
Area .354 sq. m.
Pop. 448,206
FERMANAGH F 5
Area. .715 sq. m.
Pop. 65,430
GALWAY . . G 2
Area, 2,374 sq. m.
Pop. ... .192,549
KERRY . . H 2
Area, 1,859 sq. m.
Pop. . .165,726
KILDARE ...G 5
Area. 654 sq. m.
Pop. 63,566
KILKENNY . H 5
Area 800 sq. m.
Pop. 79,159
KING'S . . G 4
Area .772 sq. m.
Pop. .. 60,187
LEITRIM . . F 4
Area 613 sq. m.
Pop. .. 69,343
LIMERICK . H 3
Area, 1,064 sq. m.
Pop. 146,098
LONDONDERRY E 5
Area 816 sq. m.
Pop. .144,404
LONGFORD . . F 4
Area 421 sq. m.
Pop. ... 46,672
LOUTH F 5
Area. 316 sq. m.
Pop. . . 65,820
MAYO. . . G 3
Area, 2,157 sq. m.
Pop. .. 199,166
MEATH . ...G 5
Area 906 sq. m.
Pop. 67,497
MONAGHAN G 5
Area . .500 sq. m.
Pop. 74,611
QUEEN'S....H 5
Area 664 sq. m.
Pop. 57,417
ROSCOMMON . G 4
Area. 991 sq. m.
Pop. . 101,791
SLIGO . . F 3
Area. .707 sq. m.
Pop. ...84,083
TIPPERARY H 4
Area, 1,659 sq. m.
Pop. 160,232
TYRONE F 5
Area, 1,260 sq. m.
Pop. 150,567
WATERFORD I 4
Area 717 sq. m.
Pop. 87,187
WESTMEATH G 5
Area. .708 sq. m.
Pop. 61,629
WEXFORD H 6
Area .901 sq. m.
Pop. 104,104
WICKLOW . H 6
Area. .781 sq. m.
Pop. 60,824

CHIEF CITIES.

Pop.— Thousands.

349 Belfast S 5
289 Dublin R 10
76 Cork . . .H 16
40 Londonderry M 4
38 Limerick H 13
32 Rathmines M 8
27 Waterford N 14
17 Kingstown R 10
13 Galway . F 10
13 Dundalk Q 8
13 Drogheda Q 9
13 Newry . . Q 7
12 Lurgan . . Q 6
11 Lisburn R 5
11 Wexford P 14
11 Sligo ....I 6
10 Kilkenny M 13
9 Tralee . . C 14
9 Newtownards T 5
9 Queenstown J 16
9 Blackrock R 10
9 Ballymena R 4
8 Clonmel . L 14
8 Portadown Q 6
7 Armagh P 6
7 Bray . ....R 11
7 Coleraine P 3
7 Athlone K 10
7 Carlow O 12
6 Fermoy I 15
6 Tipperary J 14
6 New Ross O 14
6 Enniscorthy P 14

Pop.—Thousands.

6	Carrick-on-Suir	M 14
6	Enniskillen	L 6
6	Killarney	E 15
5	Ennis	F 12
5	Mullingar	M 9
5	Dungarvan	L 15
5	Strabane	M 4
5	Banbridge	R 6
5	Athy	O 12
5	Ballina	F 7
5	Nenagh	J 12
5	Ballinasloe	I 10
5	Kinsale	I 17
5	Tullamore	L 11
5	Thurles	K 13
4	Mallow	H 15
4	Youghal	K 16
4	Parsonstown	K 11
4	Carrickfergus	S 5
4	Larne	S 4
4	Arklow	R 12
4	Kilrush	E 13
4	Westport	E 8
4	Omagh	M 5
4	Legoniel	R 5
4	Navan	P 9
4	Cookstown	P 5
4	Bangor	T 5
4	Longford	K 9
4	Dungannon	O 6
4	Naas	P 11
4	Listowel	D 14
4	Castlebar	E 8
3	Bandon	H 16
3	Bessbrook	Q 7
3	Holywood	S 5
3	Wicklow	R 12
3	Skibbereen	E 17
3	Middleton	J 16
3	Clonakilty	G 17
3	Cashel	K 13
3	Newbridge	O 11
3	Dalkey	R 10
3	Downpatrick	T 6
3	Tuam	G 9
3	Ballymoney	Q 3
3	Cavan	M 8
3	Monaghan	O 7
3	Macroom	G 16
3	Bantry	E 17
3	Loughrea	H 11
3	Maryborough	M 11
3	Killiney and Ballybrack	R 11
3	Mountmellick	M 11
3	Roscrea	K 12
2	Ballyshannon	J 5
2	Brabazon Park	F 6
2	Templemore	K 12
2	Kells	O 9
2	Dromore	R 6
2	Letterkenny	K 4
2	Mitchelstown	J 14
2	Balbriggan	R 9
2	Gorey	Q 13
2	Newcastle	F 14
2	Castletown Bearhaven	C 17
2	Rathkeale	G 13
2	Ardee	P 8
2	Comber	T 5
2	Caher	K 14
2	Clones	M 7
2	Portarlington	N 11
2	Dunmanway	F 17
2	Roscommon	J 9
2	Cahersiveen	B 16
2	Callan	M 13
2	Charleville	H 14
2	Warrenpoint	R 7
2	Bagenalstown	O 13
2	Donaghadee	T 5
2	Ballinrobe	F 9
2	Tramore	N 15
2	Granard	L 8
2	Skerries	R 9
2	Carrickmacross	O 8
2	Tullow	O 12
2	Passage West	I 16
2	Dingle	B 15
2	Castleblayney	P 7
2	Kanturk	G 15
2	Belturbet	M 7
2	Portrush	P 3
2	Mountrath	M 12
2	Lismore	K 15
2	Portaferry	T 6
2	Fethard	L 14
2	Cootehill	N 7
2	Buttevant	H 11
2	Edenderry	N 10
2	Castleisland	F 15
2	Kilkee	D 13
2	Ballynahinch	S 6
2	Magherafelt	P 5
2	Trim	O 9
2	Killyleigh	T 6
1	Gort	G 11
1	Ballycastle	Q 3
1	Swineford	G 8
1	Ballyclare	R 4
1	Tanderagee	Q 6
1	Keady	P 7
1	Portlaw	M 14
1	Antrim	Q 5
1	Ballybay	O 7
1	Kilkeel	S 7
1	Cappoquin	K 15
1	Moate	L 10
1	White Abbey	S 5
1	Donegal	J 5
1	Millstreet	F 15
1	Fintona	M 6
1	Milltown Malbay	E 12
1	Ballaghadereen	H 8

SCOTLAND

(Kingdom)
Area 30,405 sq. m.
Pop. 4,627,656

COUNTIES.

ABERDEEN. O 7
Area 1,955 sq. m.
Pop. 304,420

ARGYLE . G 9
Area 3,213 sq. m.
Pop. 73,365

AYR .... J 12
Area 1,128 sq. m.
Pop. 251,436

BANFF. .. . N 6
Area 641 sq. m.
Pop 61,487

BERWICK ... P 11
Area 461 sq. m.
Pop. 30,816

BUTE ...... H 12
Area 218 sq. m.
Pop. 18,786

CAITHNESS M 3
Area 686 sq. m.
Pop. 33,859

CLACKMANNAN L 10
Area ....48 sq. m.
Pop. 32,019

DUMBARTON J 10
Area 241 sq. m.
Pop. 113,870

DUMFRIES. M 13
Area 1,063 sq. m.
Pop. 72,569

EDINBURGH M 11
Area ...362 sq. m.
Pop. 488,647

ELGIN .... M 6
Area 476 sq. m.
Pop. 41,808

FIFE .... N 10
Area ...492 sq. m.
Pop. 218,843

FORFAR .... O 8
Area .. 875 sq. m.
Pop. 284,078

HADDINGTON O 11
Area ...271 sq. m.
Pop. 38,662

INVERNESS I 7
Area 4,088 sq. m.
Pop. 90,182

KINCARDINE P 8
Area ...383 sq. m.
Pop. 40,918

KINROSS ... M 10
Area .... 73 sq. m.
Pop. 6,980

KIRKCUDBRIGHT. K 13
Area ...898 sq. m.
Pop. 39,407

LANARK .... L 11
Area .. 882 sq. m.
Pop. ...1,339,289

LINLITHGOW M 11
Area ...120 sq. m.
Pop 65,699

NAIRN .... L 6
Area ...195 sq. m.
Pop. 9,291

ORKNEY .... M 1
Area 376 sq. m.
Pop. 28,698

PEEBLES ... M 12
Area 355 sq. m.
Pop. 15,066

PERTH .... L 9
Area 2,528 sq. m.
Pop. 123,262

RENFREW .. J 11
Area ...245 sq. m.
Pop. 268,934

ROSS AND CROMARTY H 6
Area 3,078 sq. m.
Pop. 76,421

ROXBURGH P 12
Area ...665 sq. m.
Pop. 48,793

SELKIRK ... N 12
Area ...257 sq. m.
Pop. 23,339

SHETLAND.. Q 4
Area 551 sq. m.
Pop. 28,185

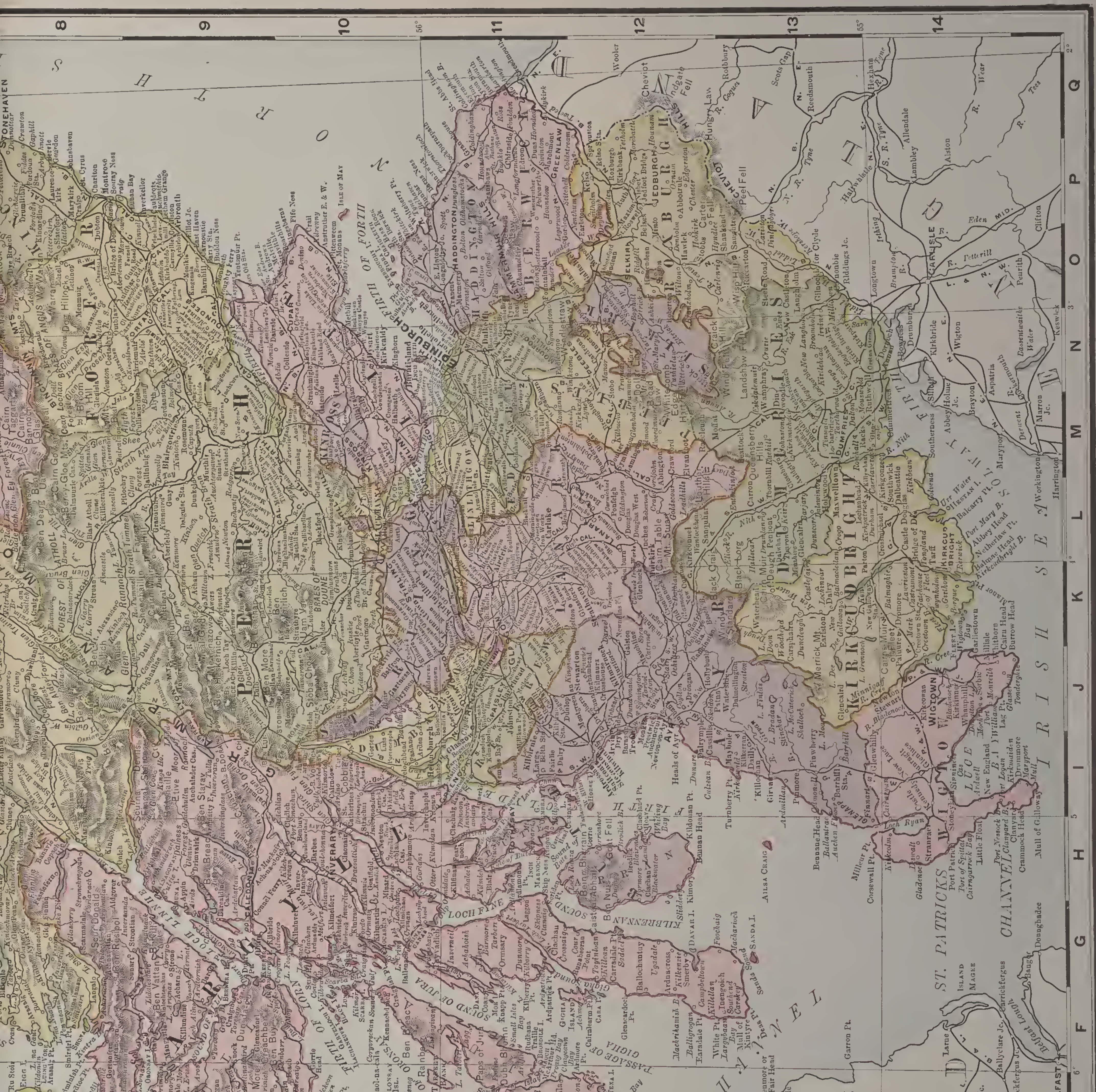
STIRLING .. J 10
Area 447 sq. m.
Pop. 142,338

SUTHERLAND J 4
Area 2,028 sq. m.
Pop. 21,550

WIGTOWN ... I 14
Area. 486 sq. m.
Pop. 32,683

CHIEF CITIES.

Pop.—Thousands.
760 Glasgow K 11
316 Edinburgh N 11
161 Dundee O 9
153 Aberdeen Q 7
79 Paisley . J 11
77 Leith... N 11
76 Govan.... J 11
68 Greenock I 11
54 Partick . J 11
46 Bothwell K 11
37 Coatbridge K 11
34 Kilmarnock J 12
34 Kircaldy N 10
33 Perth ... M 9
33 Hamilton K 11
30 Motherwell L 11
29 Falkirk .. L 10
29 Ayr ...... J 12



25	Dunfermline	M 10
22	Arbroath	P 9
22	Airdrie	L 11
21	Inverness	K 6
21	Wishaw	L 11
20	Dumbarton	J 11
17	Hawick	O 12
17	Port Glasgow	I 11
16	Rutherglen	K 11
14	Stirling	L 10
14	Blantyre	K 11
14	Neilston	J 11
14	Galashiels	O 12
13	Dumfries	M 13
12	Montrose	P 8
12	Peterhead	R 6
12	Musselburgh	N 11
11	Alloa	L 10
11	Forfar	O 9
11	Pollockshaws	K 11
11	Johnstone	J 11
11	Kirkintilloch	K 11
10	Broughty Ferry	O 9
10	Barrhead	J 11
10	Irvine	I 12
9	Stevenston	I 12
9	Rothesay	H 11
9	Portobello	N 11
9	Bo'ness	M 9
9	Fraserburgh	R 5
9	Brechin	P 8
9	Helensburgh	I 10
8	Denny	L 10
8	Elgin	M 6
8	Saltcoats	I 12
8	Westcalder	M 11
8	Grangemouth	L 10
8	Renfrew	J 11
8	St. Andrews	O 9
8	Beith	J 11
7	Cowdenbeath Jc.	N 10
7	Kilsyth	K 11
7	Kilbirnie	I 11
7	Bathgate	M 11
7	Dunoon	I 11
7	Dalkeith	N 11
7	Buckie	O 5
6	Ardrossan	I 12
6	Maybole	I 12
6	Muirkirk	K 12
5	Leven	N 10
5	Selkirk	O 12
5	Lochgelly	N 10
5	Fetteresso	Q 8
5	Oban	G 9
5	Peebles	N 12
5	Crieff	L 9
5	Carnoustie	P 9
5	Old Cumnock	K 12
5	Lanark	L 12
5	Galston	J 12
5	Keith	O 6
5	Burntisland	N 10
5	Troon	I 12
5	Alva	L 10
5	Stonehaven	Q 8
5	Cupar	O 10
4	Nairn	L 6
4	Kilwinning	I 12
4	Forres	M 6
4	Annan	N 11
4	Huntly	O 6
4	Kirriemuir	K 12
4	Lerwick	Q 3
4	Girvan	I 13
4	Kelso	P 12
4	Haddington	O 11
4	Linlithgow	M 11
4	Armadale	L 11
4	Lossiemouth	N 5
4	Banff	P 5
4	Thurso	M 3
4	Stornoway	D 4
4	Stonehouse	K 11
4	Kirkwall	N 2
4	Dunbar	P 10
4	Dysart	N 10
4	Milngavie	K 11
4	Blairgowrie	M 9
3	Tillicoultry	L 10
3	Tayport	O 9
3	Kirkcudbright	L 14
3	Largs	I 11
3	Bridge of Allen	L 10
3	Langholm	O 13
3	Darvel	K 12
3	Inverurie	P 7
3	Loanhead	L 10
3	Bonnyrig	N 11
3	Newport	O 9
3	Stewarton	J 11
3	Penicuik	N 11
3	N. Berwick	P 10
3	Tranent	O 11
3	Kilrenny	P 10
3	Dingwall	J 6
3	Dunblane	L 10
2	Eyemouth	Q 11
2	Lockerbie	N 13
2	Auchterarder	M 10
2	Turriff	P 6
2	Jedburgh	P 12
2	Duns	Q 11
2	Innerleithen	N 12
2	Moffat	M 12
2	Coupar-Angus	N 9
2	Rattray	N 9
2	Cullen	O 5
2	Portsoy	O 5
2	Prestonpans	O 11
2	Kinghorn	N 10

ENGALND AND WALES

(Kingdom)

Area, 58,309 sq. m.
Pop. .. 32,526,075

CHIEF CITIES.

Pop. Thousands.

1 536 London G 5
685 Liverpool D 3
544 Manchester F 3
522 Birmingham F 4
429 Leeds F 3
381 Sheffield F 3
329 Bristol E 5
280 Bradford F 3
267 Westham H 5
241 Hull G 3
240 Nottingham F 4
215 Newcastle F 2
212 Leicester G 4
189 Portsmouth G 6
168 Bolton E 3
164 Cardiff D 5
147 Sunderland F 2
137 Oldham E 3
134 Croydon G 5
128 Blackburn E 3
123 Brighton G 6
117 Woolwich H 5
115 Willesden G 5
114 Ystradyfodwg D 5
113 Preston E 3
112 Norwich I 4
111 Birkenhead D 3
108 Plymouth D 6
106 Derby F 4
105 Halifax F 3
105 Southampton F 6
103 Tottenham H 5
99 Leyton I 1
97 S. Shields F 2
96 Greenwich G 5
95 Swansea C 5
95 Walthamstow H 5
95 Huddersfield F 3
94 Wolverhampton E 4
91 Middlesborough G 2
87 Northampton G 4
86 Walsall F 4
84 St. Helens E 3
83 Rochdale E 3
79 Stockport E 3
78 York F 3
77 Aston Manor F 4
72 Reading F 5
72 Hornsey H 1
70 Coventry F 4
70 Devonport C 6
69 Merthyr-Tydfil D 5
67 Newport D 5
67 Ipswich H 4
66 Hastings H 6
65 West Bromwich F 4
64 Warrington E 3
63 Great Grimsby G 3
63 West Hartlepool G 2
62 Hanley E 4
61 Wigan E 3
59 Bootle D 2
58 Bury E 3
58 Barrow-in-Furness D 2
55 Smethwick E 4
54 Rotherham F 3
52 Tynemouth F 2
51 Stockton F 2
51 Great Yarmouth I 4
50 Burton-on-Trent F 4
50 Bath E 5
49 Cheltenham E 5
49 Oxford F 5
49 Dudley E 4
49 Lincoln G 3
48 Southport D 3
48 Gloucester E 5
47 Blackpool D 3
47 Bournemouth F 6
47 Exeter D 6
47 Worcester E 4
45 Carlisle D 2
45 Swindon F 5
44 Darlington F 2
44 Ashton-Under-Lyne F 3
43 Aberdare D 5
43 Eastbourne H 6
43 Accrington E 3
43 Enfield H 5
42 Crewe E 3
42 Dover I 5
42 Wimbledon G 5
42 Keighley F 3
42 Wakefield F 3
41 Barnsley F 3
41 Ilford H 5
41 Chatham H 5
40 Lancaster E 3
40 Leigh E 3
39 Gillingham E 6
39 Burslem E 4
38 Cambridge H 4
38 Colchester H 5
38 Scarborough G 2
38 Acton G 5
37 Hove G 6
36 Luton G 5
36 Chester E 3
36 Longton F 4
35 Bedford G 4
35 Macclesfield E 3
34 Kingston-on-Thames G 5
34 Eccles E 3
34 Jarrow F 2
34 Woodgreen H 1
34 Torquay D 6
34 Maidstone H 5
33 Tunbridge Wells H 5
33 Ealing G 1
33 Nelson E 3
33 Hyde E 3
32 Pontypridd D 5
32 Richmond G 5
31 Mountain Ash D 5
31 Rawtenstall E 3
31 Aldershot G 5
31 Peterborough G 4
31 Folkestone I 5
31 Rochester H 5
31 Tipton E 4
30 Stoke-upon-Trent E 4
30 Batley F 3
30 Lowestoft I 4
30 Chiswick G 1
29 Watford G 5
29 Doncaster F 3
29 Gosport F 6
29 Southend H 5
29 Kettering G 4
29 Widnes E 3
28 Harrogate F 3
28 Shrewsbury D 4
28 Dewsbury F 3
28 Ramsgate I 5
28 Stalybridge F 3
27 Bromley H 5
27 Chesterfield F 3
27 Gravesend H 5
27 Burnley E 3
27 Leamington F 4
27 Chorley E 3
27 Wednesbury F 4
26 Beckenham H 5
26 Workington D 2
26 Reigate G 5
26 Shipley F 3
25 Todmorden F 3
25 Ilkeston F 4
25 Erith H 5
25 Middleton E 3
25 Nuneaton F 4
25 Canterbury I 5
25 Kidderminster E 4
24 Bilston E 4
24 Cannock F 4
24 Morley F 3
23 Waterloo D 3
23 Margate I 5
23 Colne E 3
23 Fenton E 4
23 Hartlepool F 2
23 Bacup E 3
22 Felling F 2
22 Barking H 5
22 Glossop F 3
22 Loughborough F 4
21 Mansfield F 3
21 Hereford E 4
21 Taunton E 6
21 Ebbw Vale D 5
21 Twickenham G 2
21 Wallsend F 2
21 Winchester F 6
21 Hebburn F 2
21 Stafford E 4
20 Kings-Lynn H 4
20 Worthing G 6
20 Newcastle-under-Lyme E 4

SPAIN

(Kingdom)
Ar., 190,670 sq. m.
Pop.....18,618,086

CHIEF CITIES.
Pop.—Thousands.

512 Madrid D 8
510 Barcelona C 14
205 Valencia E 11
146 Seville.. G 6
126 Malaga H 7
108 Murcia G 11
98 Saragossa C 11
86 Cartagena G 11
75 Granada .H 8
70 Cadiz .... H 5
69 Valladolid C 7
63 Palma ...E 14
60 Jerez de la Frontera H 6
60 Lorca... G 10
57 Cordoba . G 7
51 Santander A 8
49 Alicante G 11
47 Almeria . H 9
46 Oviedo ... A 5
43 Gijon .... A 6
41 Coruna ... A 3
36 San Sebastián A 10
[illegible]
31 Castellon de la Plana E 12
31 Alcoy. . F 11
31 Victoria B 9
30 Pamplona B 10
29 San Fernando H 5
29 Badajoz... F 5
28 Elche ...G 11
27 Orihuela G 11
27 Reus.....D 13
26 Jaen ..... G 8
26 Lugo......B 4
25 Tarragona D 13
25 Manresa..C 13
25 Ferrol ...A 3
24 Antequera H 7
24 Santiago de Compostela B 3
21 Salamanca D 6
21 Ecija .....G 6
23 Toledo....E 7
23 Vélez Malaga H 7
23 Sanluca de Barrameda H 5
23 Tortosa .D 12
23 Sabadell. C 14
22 Siero .....A 6
22 Tineo......A 5
21 Lérida ...C 12
21 Lucena .. G 7
21 Villaviciasa A 6
1 Puerto de Santa Maria. H 6
20 Cuevasde Vera ..... H 9
20 Ubeda .....G 8
20 Pontevedra B 3
20 Mataró...C 14
20 Huelva... H 4
20 Valdepeñas F 8
20 Alcira....F 11
19 Logroño . B 9
19 Ronda.... H 6
19 Llanes ....A 7
18 Carmona..H 6
18 Loja.......H 7
18 Badalona. C 14
18 Ortiguecera A 4
18 Osuna.....H 7
18 Mahon ...E 16
17 Vigo ......C 3
17 Fousagrada B 4
17 Motril.....H 8
17 Martos....G 7
17 Yecla ....F 10
17 Maxarron G 10
16 Zamora....C 6
16 Salas .....C 13
16 Palencia ..C 7
16 Gerona...C 14
16 [illegible] Overa .....G 9
16 Jumilla ..F 10
16 Don Benito F 6
15 Chantada..B 4
15 Tarrasa ..C 14
15 Alcalá la Real G 8
15 León ....B 6
15 Orense ...B 4
15 Caravaca G 9
5 Villarreal .E 11

PORTUGAL

(Kingdom)
Area, 35,490 sq.m.
Pop.....5.423,132

CHIEF CITIES.
Pop.—Thousands.

301 Lisbon... F 3
139 Oporto . D 3
23 Braga......C 3
19 Loule .... H 4
18 Setubal....F 2
18 Govilha . D 4
17 Coimbra...D 3
15 Evora .... F 3
13 Elvas .... F 4
12 Povoa de Varzim ....C 2
12 Villa Nova de Gaia ....D 2
12 Tavira ....H 4
11 Ovar ......D 3
11 Ilhavo ....D 3
11 Portalegre F 4
10 Vianna do Castello....C 2
9 Faro........H 4
9 Torres Novas E 3
9 Olhao ......H 4
9 Aveiro .... D 3
9 Lamego ....D 4
9 Guimaraes .C 3
8 Beja ....G 4
8 Silves ....H 3
8 Cezimbra ..F 2
8 Lagos ...H 3
8 Santarem ..F 3
8 Viseu .....D 4
7 Chaves.....C 4
7 Lavos ..... E 2
7 Mira ...D 3
7 Estremoz . F 4
7 Abrantes E 3
7 Monchique. G 8

ANDORRA...B 13
(Republic)
Area, 175 sq. m.
Pop ...6,000

GIBRALTAR I 12
(British Colony)
Area, 1 9-10 sq.m.
Pop 26,830

FRANCE

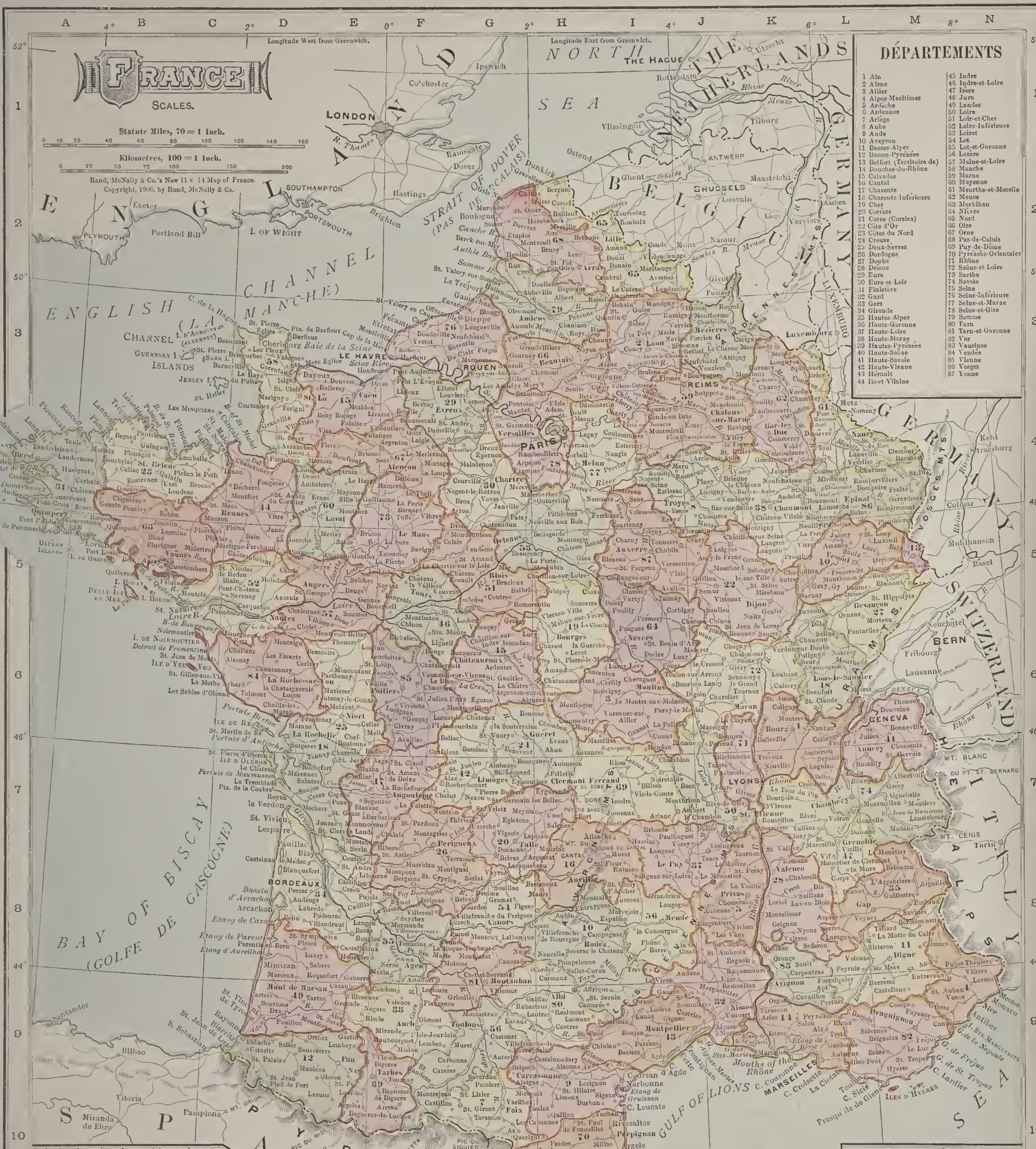
(Republic)

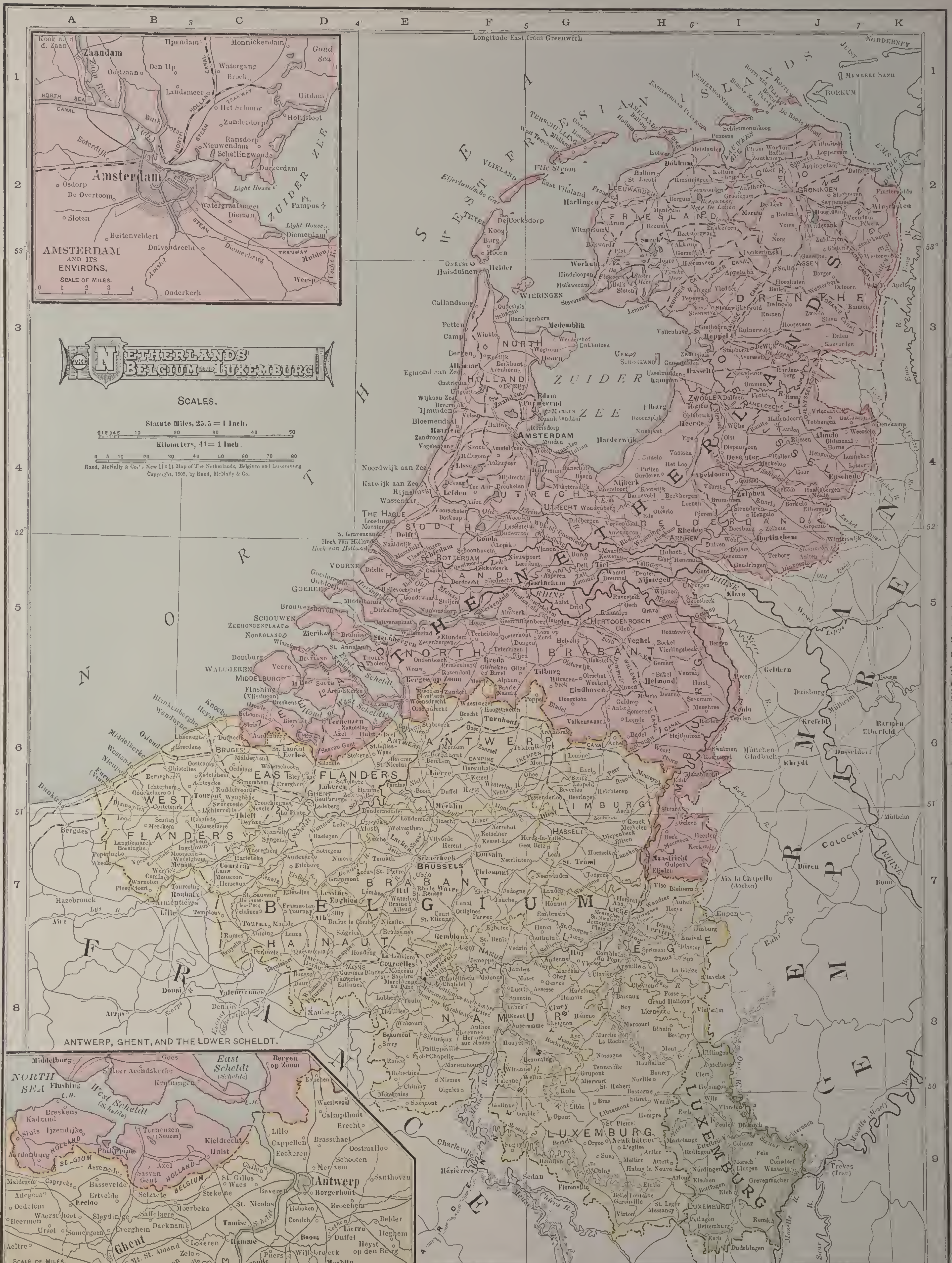
Ar. .207,054 sq. m.
Pop 38,961,945

CHIEF CITIES.

Pop.—Thousands.

2714 Paris. . . . H 4
491 Marseilles K 9
459 Lyons . . . J 7
257 Bordeaux E 8
211 Lille . . . . . . I 2
150 Toulouse G 9
147 St. Etienne J 7
133 Nantes . . . D 5
130 le Havre. . E 3
124 Roubaix . I 2
116 Rouen. . . . G 3
108 Reims . . . . J 3
105 Nice. . . . . M 9
103 Nancy . . . . L 4
102 Toulon . K 10
91 Amiens . . . H 3
84 Brest. . . . A 4
84 Limoges . . G 7
82 Angers. . . . E 5
81 Nimes. . . . . J 9
79 Tourcoing I 2
76 Montpellier I 9
75 Rennes . . . D 5
71 Dijon . . . . J 5
69 Grenoble. . K 7
67 Orleans . . . G 5
65 le Mans . . . F 5
61 St. Denis. . H 4
60 Calais. . . . . G 2
55 Besancon L 5
55 Versailles. G 4
53 Troyes . . . . I 4
53 Clermont Ferrand. . H 7
52 Beziers. . . I 9
50 St. Quentin I 3
50 Boulogne G 2
46 Avignon. . J 9
46 Bourges . H 6
45 Lorient . . . B 5
45 Caen . . . . . . E 4
43 Cherbourg D 3
40 Poitiers. . . F 6
39 Dunkirk . . H 2
38 Angouleme F 7
36 Rochefort. E 7
36 Perpignan I 10
36 St. Nazaire C 5
35 Montlucon H 6
35 Roanne. . . I 7
34 Pau. . . . . . . E 9
34 Douai. . . . . I 2
33 Cette . . . . . I 9
33 Belfort . . . L 5
32 Perigueux F 7
32 La Rochelle E 6
31 Vincennes D 11
31 Valenciennes I 2
31 Carcassonne H 9
31 Montauban G 9
31 le Creusot J 6
30 Laval . . . . . E 5
29 Aix . . . . . . K 9
29 Armentieres H 2
29 Arles. . . . . . J 9
29 Châlon-sur-Saône . . . . J 6
29 Narbonne I 10
28 Epinal. . . . . L 4
28 Nevers . I 6
28 Bayonne. . D 9
27 Castres. . . . H 9
27 Valence. . . K 8
27 Châlons-sur-Marne . . . J 4
27 Cambrai. . . I 3
26 Tarbes. . . . F 9
26 Arras . . . . . H 2
25 Bastia. M 11
25 Châteauroux G 6
25 Alais. . . . . . I 9
25 Vienne . J 7
24 Lens. . . . . . H 2
24 Niort. . . . . E 6
24 Blois . . . . G 5
23 Chartres . . G 4
23 Vannes . C 5
23 Lunéville L 4
23 Dieppe. G 3
23 Albi. . . . . . . H 9
22 Agen. . . . . . F 9
22 Moulins. . . . I 6
22 St. Brieuc . C 4
22 Chambery K 7
22 Ajaccio. . L 11
21 St. Die. . . . M 4
21 Verdun . . . K 4
21 Fougeres D 4
21 St. Omer. . H 2
21 Maubeuge . I 2
21 Châtellerault F 6
21 Le Puy . . . . I 8
20 Epernay . . I 4
20 Abbeville H 3
20 Beauvais. H 3
19 Brives . . . . G 8
19 Cognac . E 7
19 Quimper . A 5
19 Cholet E 6
19 Sedan . . . . . K 3
19 Libourne . E 8
19 Elbeuf . . . . F 3
19 Bourg. . . . . K 6
19 Macon . J 6
19 Auxerre . . . I 5
19 Charleville J 3
19 Millau . . . . H 9
18 Evreux . . F 4
18 Saintes. . . . E 7
18 Bar le Duc K 4
18 Hyéres L 9
18 Thiers . . . . . I 7
17 Annonay. . J 7
17 Aurillac . H 8
17 Tulle. . . . . . G 7
17 Argenteuil C 10
17 St. Germain G 4
17 Alencon. . . F 4
17 Romans . . K 8
17 Compiegne H 3
16 Lisieux . F 3
16 Saumur . . E 5
16 Rodez . . H 8
16 Rive de Gier J 7
16 Morlaix . B 4
16 Bergerac. . F 8
16 Autun. . . . . J 6
15 Laon . . . . I 3
15 Grasse . . L 9
15 Fecamp . . F 3
15 Sens . . . . . I 4
15 Villefranche J 7
15 Chaumont K 5
15 Dole . . . . . K 6
15 St. Dizier. . J 4





BELGIUM
(Kingdom)
Area, 11,573 sq. m.
Pop. 6,711,532

CHIEF CITIES.
Pop.—Thousands.

571 Brussels . . E 7
282 Antwerp . E 6
163 Ghent . . . D 6
56 Mons . . . D 8
56 Mechlin . . . F 6
53 Bruges . . . . C 6
53 Schaerbeek E 7
52 Verviers H 7
42 Louvain . . . F 7
39 Seraing H 7
38 Ostend . B 6
37 Tournay D 7
36 Courtrai . C 7
32 Namur . . F 8
30 St Nicolas E 6
30 Alost . . . . . E 7
30 Borgerhout E 6
25 Laeken E 7
24 Charleroi E 8
20 Gilly . . . E 8
20 Lokeren . . D 6
20 Lierre . . . F 6
18 Turnhout . F 6
17 Liege . . . . H 7
17 Renaix . . . . D 7
16 Ypres . . . B 7
16 Tirlemont F 7
16 Marchienne E 8
15 Montigny sur Sambre . . . . E 8
15 La Louviere E 8
14 Boom . . . . . . E 6
14 Huy . . . . . . G 7
14 Menin C 7
14 Mouscron . C 7
[illegible]
13 Dison . . . H 7
13 Wasmes D 8
13 Uccle . . . E 7
13 Herstal . H 8
13 St Troud . . G 7
13 Ledeberg . . D 7
13 Zele . . . . E 6
13 Hamme . . . E 6
12 Berchem . E 6
12 Courcelles E 6
12 Chatelet . F 8
12 Eecloo . . . . D 6
12 Wetteren . D 7
12 Gheel . . . . G 9
11 Poperinghe B 7
11 Nivelles . . . E 7
11 Tamise . . . E 6
11 Frameries D 8
11 Grammont D 7
11 Hal . . . . E 7
11 Ougree . . . H 7
11 Dour . . . . D 8
11 Paturages D 8
10 Chatelineau F 8
10 Vilvorde . . E 7

NETHERLANDS
(Kingdom)
Area, 12,648 sq. m.
Pop. . . . 5,104,137

CHIEF CITIES.
Pop.—Thousands.

511 Amsterdam G 4
319 Rotterdam E 5
206 The Hague E 4
102 Utrecht . G 4
67 Groningen J 2
57 Arnhem . H 5
54 Leiden . E 4
45 Nijmegen H 5
41 Tilburg G 5
38 Dordrecht F 5
34 Maastricht H 7
32 Leeuwarden H 2
32 Delft . . . . . . E 4
31 Zwolle . . . . I 3
31 Hertogenbosch G 5
27 Schiedam . E 5
26 Deventer . . I 4
26 Breda . . . . . F 5
26 Apeldoorn H 4
25 Helder . . . F 3
24 Enschede . J 4
22 Gouda . . F 4
21 Zaandam . F 4
20 Kampen . . H 3
19 Hilversum G 4
19 Amersfoort G 4
19 Flushing . D 6 (Vlissingen)
19 Middleburg D 6
18 Zulphen . I 4
18 Alkmaar . F 3
17 Vlaardingen E 5
16 Rheden . . . . I 4
15 Ede . . . . H 4
15 Hengelo . . . J 4
14 Venlo . . . . . . I 6
14 Rozendaal F 5
14 Bergen op Zoom . . . . . . E 6
12 Roermond H 6
12 Sneck . . . H 2
12 Hoogeveen J 3
12 Gorinchem F 5
12 Oosterhout F 5
11 Helmond . . H 6
11 Assen . . . . . J 3
11 Veendam . J 2
11 Lonneker . J 4
11 Tiel . . . . . . G 5
11 Hoorn . . . . G 3
11 Velzen . . . . F 4
10 Sliedecht . F 5
10 Harlingen . G 2
10 Voorst . . . . I 4
10 Almelo . . . . J 4

LUXEMBURG
(Grand Duchy)
Area, 998 sq. m.
Pop. 217,583

CHIEF CITIES.
Pop. Thousands.

20 Luxemburg I 9
6 Esch . . . . . . H 9
6 Eich . . . . . I 9
4 Echternach I 9
4 Wiltz . . . . H 9
4 Ettelbruck I 9
3 Mersch . . . . I 9
2 Grevenmacher I 9
2 Remich I 9
2 Hosingen I 8
2 Bettemburg I 9
2 Diekirch I 9
2 Dudelingen I 9
1 Vianden . . . . I 9

GERMANY

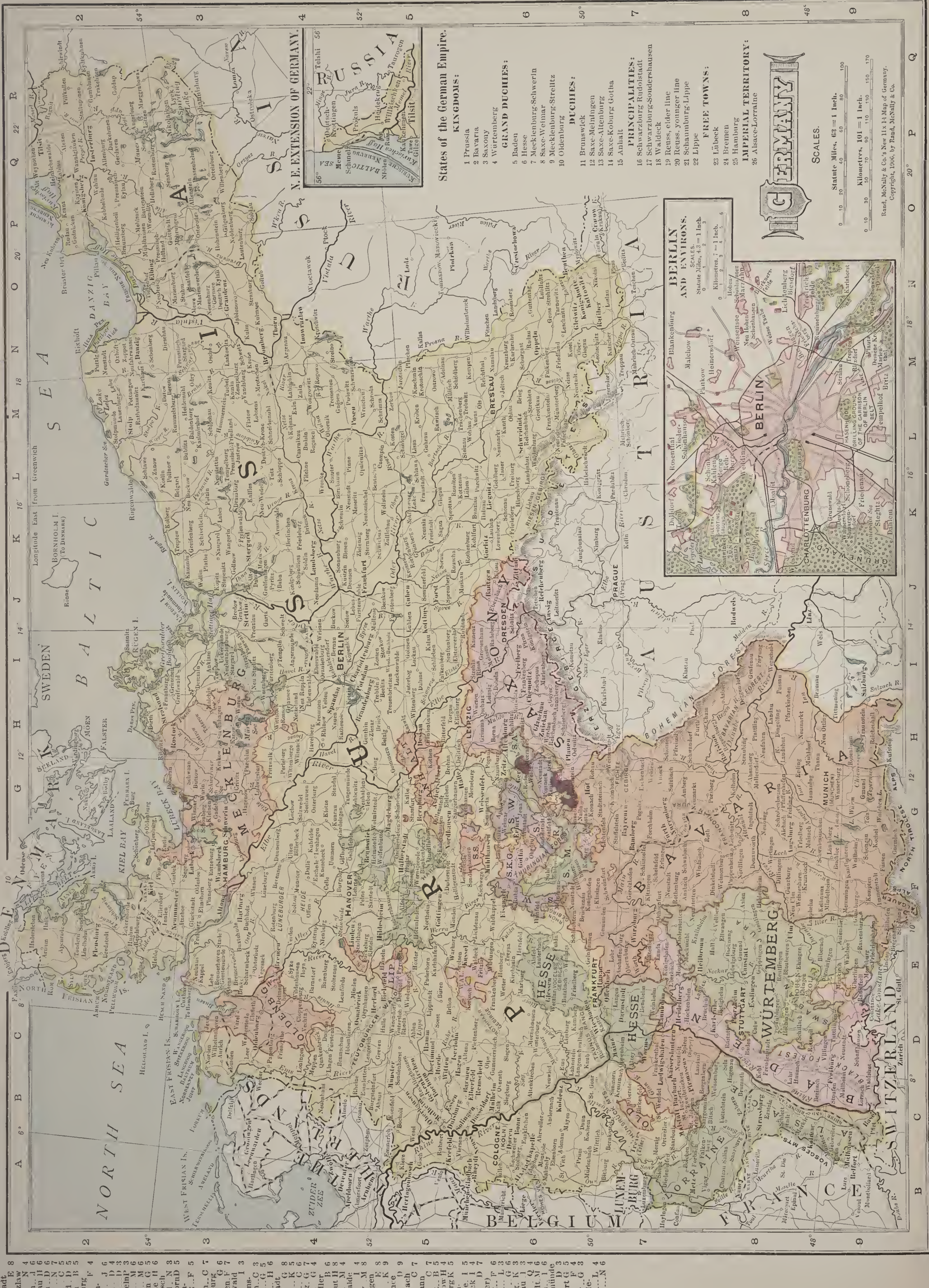
(Empire)

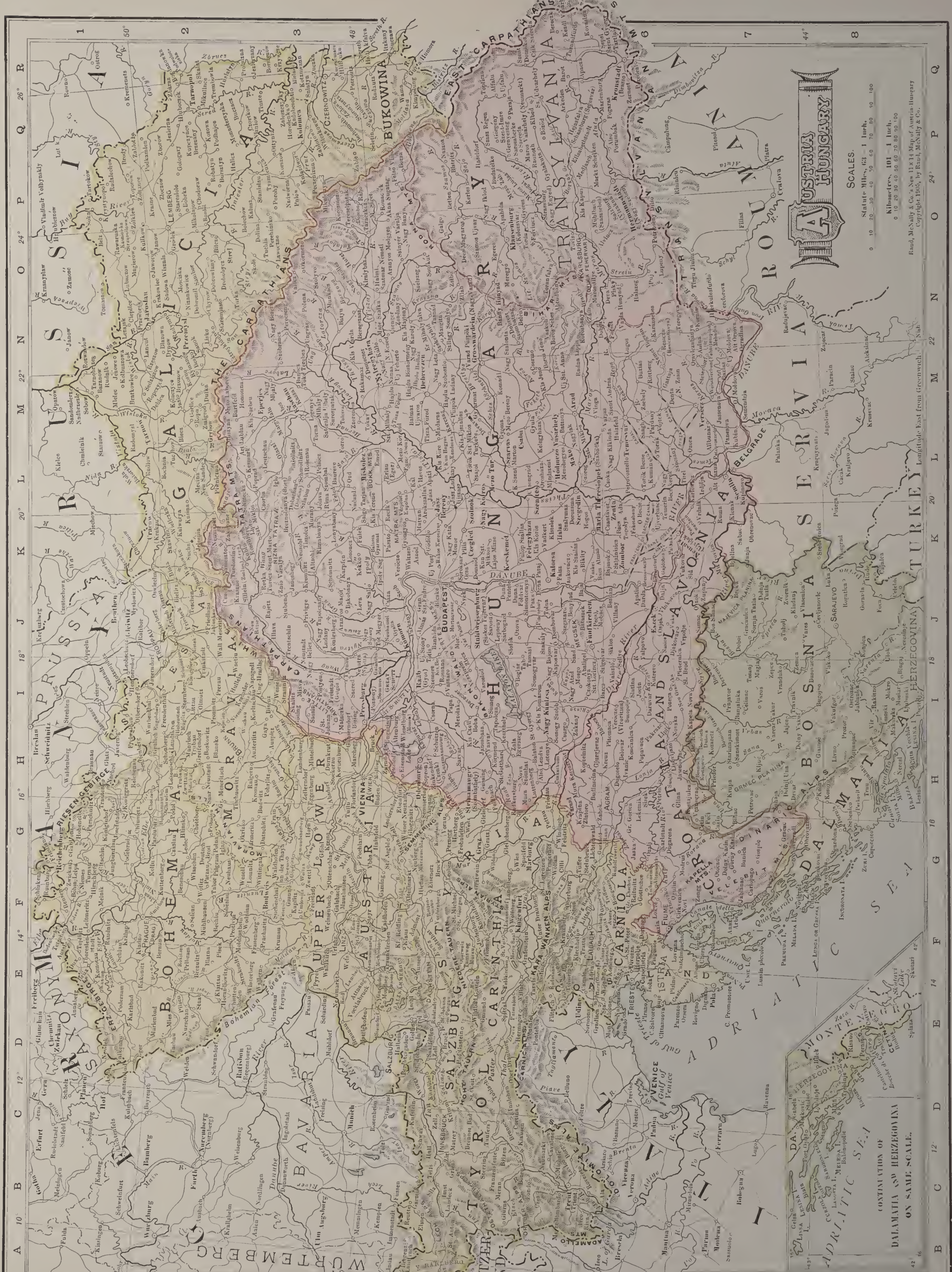
Area, 208,830 sq. m.
Pop. . . . 56,345,014

CHIEF CITIES.

Pop.—Thousands.

1888 Berlin I 4
706 Hamburg F 3
500 Munich . G 9 (München)
455 Leipzig . . H 5
423 Breslau M 6
395 Dresden . I 6
372 Cologne B 6
288 Frankfurt D 7
261 Nuremberg G 7
236 Hanover . F 4
230 Magdeburg G 5
214 Düsseldorf B 5
211 Stettin . . J 3
207 Chemnitz I 6
189 Charlottenburg . . I 4
188 Königsberg P 2
176 Stuttgart D 8
163 Bremen . E 4
162 Altona . E 3
157 Elberfeld C 5
157 Halle . . . . G 5
150 Strassburg C 8
142 Dortmund C 5
142 Barmen . C 5
141 Danzig . . N 2
140 Mannheim D 7
135 Aix la Chapelle . . B 6
128 Brunswick . . F 4
119 Essen . . . C 5
117 Posen . . . . M 4
107 Krefeld . B 5
106 Kassel . . E 5
97 Karlsruhe D 8
96 Schöneberg K 9
93 Duisburg . B 5
90 Rixdorf . M 9
89 Augsburg G 8
86 Wiesbaden D 7
85 Erfurt . . . . G 6
84 Mainz . . . . D 7
82 Lübeck . . F 3
81 Görlitz . . . . K 6
75 Würzburg E 7
74 Plauen . . . . H 6
72 Darmstadt D 7
66 Bochum . C 5
65 Spandau . . H 4
64 Münster . C 5
63 Bielefeld D 5
62 Ludwigshafen D 7
62 Frankfurt J 4
62 Freiburg . D 9
60 Potsdam . I 4
58 Metz . . . . . B 7
58 Remscheid C 5
58 München-Gladbach A 5
58 Königshütte N 6
56 Zwickau . . H 6
55 Liegnitz . . K 6
55 Rostock H 3
54 Fürth . . . . G 7
53 Elbing . O 3
52 Gleiwitz . N 6
52 Bromberg N 4
52 Osnabrück D 4
51 Beuthen . . O 6
51 Dessau . . H 5
51 Bonn . . . . B 6
51 Linden . E 4
51 Hagen . . . C 5
51 Offenbach D 7
50 Brandenburg . . H 4
49 Harburg E 3
49 Flensburg E 2
46 Gera . . G 6
45 Ratisbon H 8
45 Koblenz C 6
43 Treves . . . . B 7 (Trier)
43 Pforzheim D 8
43 Hildesheim E 5
43 Ulm . . . . . E 8
43 Halberstadt F 5
42 Oberhausen B 5
42 Bamberg G 7
41 Worms . . . D 7
40 Heidelberg D 7
39 Kottbus . . J 5
39 Schwerin G 3
38 Heilbronn E 8
37 Gelsenkirchen C 5
37 Kolmar . . C 8
37 Altenburg H 6
35 Gotha . . . . F 6
35 Tilsit . . . . Q 2
34 Rheydt . B 5
34 Landsberg K 4
34 Witten . C 5
33 Mühlhausen F 6
33 Hof . . . . . . G 6
33 Guben . . . . J 5
33 Graudenz O 3
32 Forst . . . . . . J 5
31 Eisenach F 6
31 Hamm . . . C 5
31 Malstatt-Burbach . C 7
31 Stralsund H 3
31 Zittau . J 6
31 Deutsch Wilmersdorf K 9
30 Göttingen E 5
30 Pirmasens C 7
30 Freiberg . I 6
30 Oppeln . N 6
30 Hanau . . . . E 7
30 Thorn . . . . N 4
29 Bayreuth G 7
29 Weimar . G 6
29 Nordhausen F 5
28 Neuss . B 5
28 Schweidnitz L 6
28 Weissenfels G 6
28 Wandsbek F 3
28 Mühlheim B 5
28 Insterburg Q 2
27 Zeitz G 6
27 Neumünster E 3
27 Stolp . . . M 2
27 Iserlohn . C 5
27 Aschersleben G 5
27 Esslingen D 8
27 Düren B 6
27 Stargard K 3
27 Oldenburg C 3
26 Cannstadt E 8
26 Inowrazlaw N 4
26 Bautzen . . J 6
26 Glauchau H 6
26 Giessen . . D 6
25 Ratibor . . N 7
25 Hörde . . C 5
25 Herford . D 5
25 Viersen B 5
25 Lüneburg F 4
24 Reichenberg . J 6
24 Minden . D 4
24 Lehe . . . . . D 3
24 Allenstein P 3
24 Neisse . . M 6
24 Brieg . . . . M 6
24 Eisleben . G 5
24 Meerane H 6
24 Preussisch Stargard . N 3
24 Paderborn D 5
23 Quedlinburg . . F 5
23 Saarbrücken . . C 7
23 Naumburg G 6
23 Erlangen . F 7
23 Greifswald I 3
23 Wilhelmshaven . . C 3
22 Burg . . . . G 5
22 Greiz . . . . H 6
22 Ingolstadt G 8
22 Glogau . . . K 5
22 Siegen . . C 6
22 Amberg . G 7
22 Stendal G 4
22 Eschweiler B 6
22 Landshut H 8
22 Gnesen . M 4
22 Eberswalde I 4
22 Pankow . M 8
21 Reutlingen E 8
21 Steglitz . K 9
21 Constance D 9
21 Kreuznach C 7
21 St. Johann C 7
21 Bocholt . . B 5
21 Rathenow H 4
21 Grünberg K 5
21 Luckenwalde . I 5
21 Köpenick I 4
21 Spires . . D 7 (Speyer)
20 Koburg . . F 6
20 Köslin . . . L 3
20 Apolda . . G 6
20 Kolberg . K 3
20 Prenzlau . I 3
20 Memel . . Q 4
20 Neustadt . M 6
20 Meissen . . I 6
20 Geestemünde D 3
20 Stassfurt G 5
20 Celle . F 4
20 Wismar . . G 3
20 Schneidemühl . . . . L 4
20 Zabrze . . . . N 6





AUSTRIA-HUNGARY

(Monarchy)
Ar., 241,333 sq. m.
Pop. 46,952,86

PROVINCES

BOHEMIA ....F 2
Area, 20,060 sq. m.
Pop. 6,318,280

BOSNIA AND HERZEGOVINA I 7
Area, 19,702 sq. m.
Pop. 1,591,000

BUKOWINA ..Q 4
Area, 4,035 sq. m.
Pop. 729,921

CARINTHIA ..E 5
Area, 4,005 sq. m.
Pop. 367,344

CARNIOLA ...F 6
Area, 3,856 sq. m.
Pop. 508,348

COASTLAND ..E 6
(Goritz, Istria, and Trieste)
Area, 3,084 sq. m.
Pop. 756,546

CROATIA AND SLAVONIA I 6
Area, 16,423 sq. m.
Pop. 2,416,304

DALMATIA ...H 8
Area, 4,940 sq. m.
Pop. 591,597

GALICIA .....N 2
Area, 30,307 sq. m.
Pop. 7,295,538

HUNGARY ....L 5
Ar., 109,007 sq. m.
Pop. 16,838,255

LOWER AUSTRIA G 3
Area, 7,654 sq. m.
Pop. 3,086,382

MORAVIA ....H 2
Area, 8,583 sq. m.
Pop. 2,435,081

SALZBURG ...D 4
Area, 2,767 sq. m.
Pop. 193,247

SILESIA... ...I 1
Area, 1,987 sq. m.
Pop. ..... .680,529

STYRIA ......F 4
Area, 8,670 sq. m.
Pop. 1,356,508

TYROL AND VORARLBERG ..C 5
Area, 11,324 sq. m.
Pop. 981,949

UPPER AUSTRIA F 3
Area, 4,631 sq. m.
Pop. 809,918

PRINCIPALITY

LIECHTENSTEIN A 4
Area, 65 sq. m.
Pop. 9,477

CHIEF CITIES.

Pop.—Thousands.

1662 Vienna (Wien) H 3
732 Budapest .J 4
204 Prague (Prag) F 1
160 Lemberg .P 2
138 Graz (Gratz) G 4
133 Trieste ...E 6
109 Brunn ...H 2
103 Szegedin .L 5
91 Cracow (Krakau) K 1
82 Maria Theresiopel (Szabadka) ....K 5
75 Debreczen M 4
70 Czernowitz Q 3
68 Pilsen .....E 2
66 Pressburg (Pozsony) I 3
61 Agram ... H 6
61 Vásárhely .L 5
59 Linz ...... F 3
58 Kecskemét K 3
55 Arad ......M 5
50 Grosswardein (Nagyvárad) N 4
49 Klausenburg (Kolozsvár) O 5
47 Smichow . F 2
46 Przemysl N 2
45 Pola . . E 7
44 Funfkirchen (Pécs) ... J 5
43 Miskolcz ..L 3
40 Kaschau (Kassa). M 3
39 Budweis...F 2
39 Fiume ...F 6
38 Sarajevo (Bosna-Serai) J 8
38 Csaba......L 5
37 Aussig.....E 1
37 Imoski . .I 8
37 Kronstadt (Brasso) .. Q 6
37 Laibach . .F 5
34 Reichenberg G 1
34 Kolomea ..Q 3
34 Mako .....L 5
33 Odenburg .H 4
33 Félegyháza K 5
33 Nyiregyháza M 3
33 Salzburg ..D 4
33 Zara .G 7
32 Stuhlweissenburg (Szekes Fejervar) .J 4
32 Tarnow ...M 1
31 Szentes....L 5
30 Tarnopol ..Q 2
30 Mährisch Ostrau J 2
30 Czegléd ...K 4
30 Stanislau ..P 3
30 Zombor .. K 6
30 Hermannstadt (Nagy-Szeben) O 6
29 Neusatz (Ujvidek) K 6
29 Raab (Györ) I 4
29 Zenta .....K 6
28 Wiener Neustadt G 4
27 Spalato ...H 8
27 Innsbruck C 4
27 Szatmár Németi O 4

SWITZERLAND

(Republic)

Area, 15,976 sq.m.
Pop. 3,315,413

CHIEF CITIES.

Pop.—Thousands.		
150	Zürich	F 22
113	Basel	D 15
64	Bern	K 13
56	Lausanne	P 7
36	St. Gallen	E 28
33	Vevey	Q 8
29	Luzern	J 20
22	La Chaux de Fonds	I 8
22	Winterthur	D 24
22	Bienne (Biel)	I 12
21	Neuchatel	K 9
15	Schaffhausen	B 22
13	Herisau	F 27
11	l'Abbaye	O 4
10	le Locle	J 8
10	Soleure, see Solothurn	H 13
9	Chur	L 30
7	Langnau	K 16
7	St. Imier	I 9
7	Aarau	F 18
7	Schwyz	J 23
7	Burgdorf	J 15
7	Koniz	K 13
6	Uster	F 23
6	Wadenswyl	H 23
6	Lugano	V 25
6	Yverdon	M 7
6	Carouge	T 2
6	Sumiswald	J 16
6	Porrentruy (Pruntrut)	E 10
6	Sion	T 12
5	Glarus	J 26
5	Wattwyl	G 26
5	Horgen	G 22
5	Zug	I 22
5	Thun	M 15
5	Liestal	E 16
5	Wetzikon	G 24
5	Teufen	P 29
5	Bolligen	K 14
4	Appenzell	G 29
4	Zofingen	G 17
4	Rorschach	E 30
4	Ruswil	I 18
4	Olten	F 16
4	Bex	T 10
4	Morges	P 5
4	Sarnen	L 19
4	Steffisburg	M 15
4	Kriens	J 19
4	Baar	H 22
4	Stäfa	H 23
4	Binningen	D 14
4	Langenthal	H 16
4	Richterswyl	H 23
4	Mels	J 29
4	Grenchen	H 12
4	Saanen	Q 12
4	Grabs	H 29
4	Baden	E 20
4	Airolo	P 23
4	Nyon	R 3
4	Romanshorn	D 29
4	Payerne	M 9
3	Aigle	S 10
3	Thalwyl	G 22
3	Worb	K 14
3	Bellinzona	P 26
3	Wohlen	K 13
3	Sirnach	F 25
3	Küssnacht	I 21
3	Speicher	E 29
3	Heiden	E 30
3	Grindelwald	O 18
3	Ollon	S 10
3	Toss	E 23
3	Malters	J 19
3	Sigriswyl	N 15
3	Poschiavo	S 34
3	Reinach	G 19
3	Urnäsch	G 28
3	Cham	H 21
3	Meilen	G 23
3	Willisau	I 17
3	Wyl	E 26
3	Orsieres	V 11
3	Weinfelden	D 27
3	Pfäffikon	F 21
3	Signau	L 15
3	Sennwald	G 29
3	Schupfheim	K 17
3	Mosnang	F 26
3	Bauma	F 25
3	Wallenstadt	J 28
3	Meiringen	N 19
3	Illnau	F 23
3	Seedorf	J 12
3	Gossau	G 24
3	Wynigen	I 15
3	Amriswyl	D 28
3	Chateau d'Oex	Q 11
3	Hinwyl	G 24
3	Brienz	M 18
3	Küssnacht	G 25
3	Mendrisio	X 26
3	Wasen	N 23
3	Lenzburg	F 19
3	Rüderswil	K 15
3	Monthey	T 9
3	Wohlen	F 19
3	Littau	J 19
3	Rapperswyl	H 24
3	Trogen	F 29
3	Rüti	G 25
3	Steckborn	C 25
3	Rüegsau	J 15
3	Kerns	L 20
2	Chatel, St. Denis	P 9
2	Locarno	U 23
2	Krauchthal	J 14

East from Greenwich
SCHAFFHAUSEN
THURGAU
FRAUENFELD
Winterthur
ZURICH
ST. GALLEN
APPENZELL
HERISAU
ZUG
LUZERN
SCHWYZ
GLARUS
URI
ALTDORF
GRISONS
CHUR
TICINO
BELLINZONA
Locarno
Lugano
LAKE OF CONSTANCE
Constance
Romanshorn
Rorschach
WÜRTEMBERG
BAVARIA
Kempton
Lindau
Bregenz
AUSTRIA HUNGARY
Feldkirch
Bludenz
TYROL
ARLBERG TUNNEL
St. Anton
LIECHTENSTEIN
LOWER ENGADINE
BERNINA
LAKE OF COMO
LAKE MAGGIORE
Como
Lecco
Sondrio
Chiavenna
Laveno
Domo d'Ossola
Adda
St. Gotthard
Lukmanier Pass
Splugen
Julier Pass
St. Moritz
Davos Platz
Klosters
Mesocco
LOMBARDY
Mt. Arera
Mt. Alben
Mte. Cadelle

ITALY

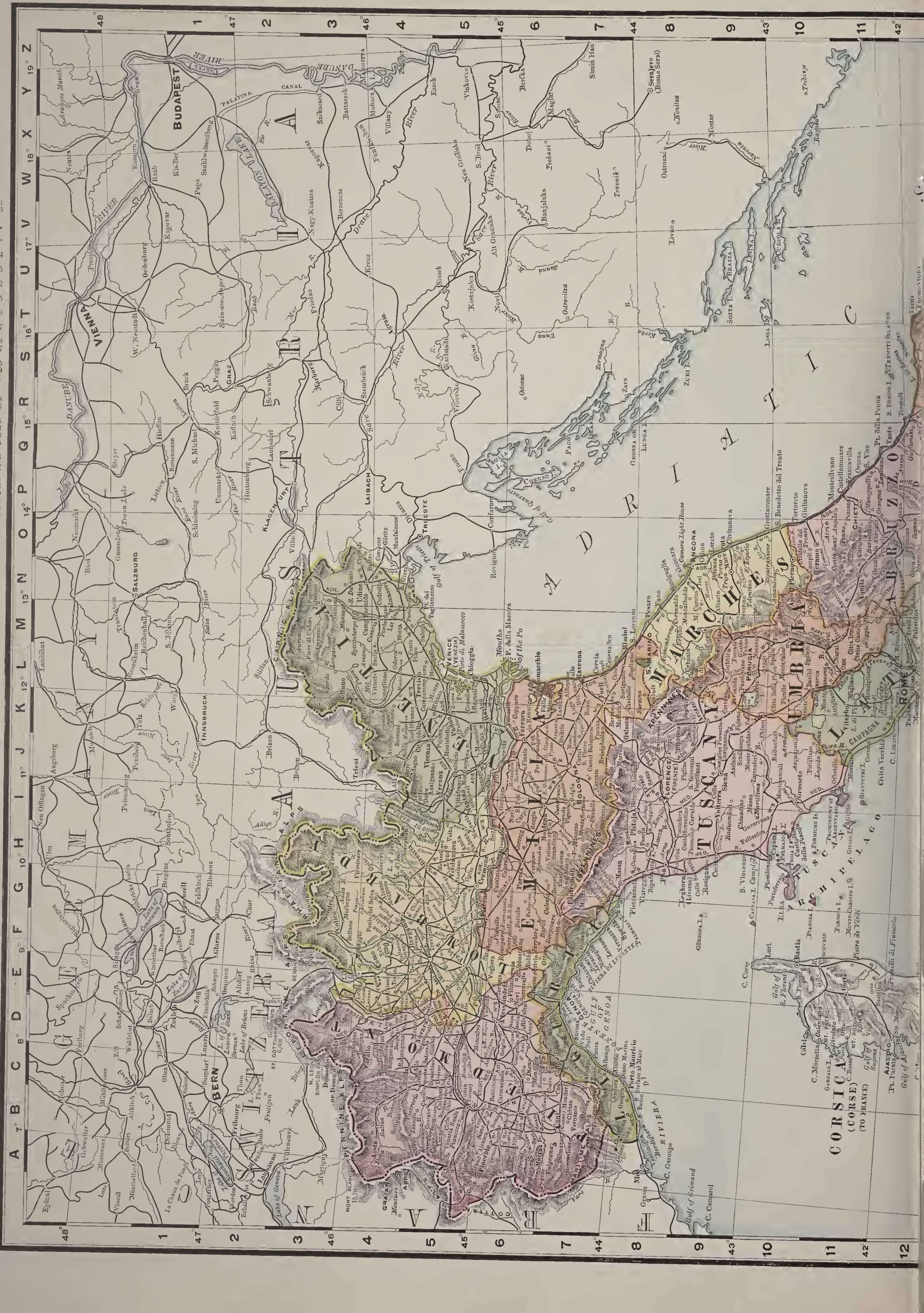
(Kingdom)

Area, 110,659 sq. m
Pop 32,475,253

CHIEF CITIES.

Pop.— Thousands.

564 Naples (Napoli) . P 14
491 Milan (Milano) . F 5
463 Rome (Roma) . L 12
336 Turin (Torino) . C 5
310 Palermo N 19
235 Genoa (Genova) E 7
206 Florence (Firenze) . J 8
152 Bologna .. J 7
152 Venice (Venezia) L 5
150 Messina . R 19
149 Catania . R 21
98 Leghorn (Livorno) H 8
88 Ferrara ... K 6
82 Padua (Padova) K 5
77 Bari .. U 13
75 Lucca ... .. I 8
74 Verona .. I 5
71 Alessandria E 6
71 Brescia ... H 5
66 Spezia ..... G 7
65 Modena .... I 6
63 Pistoja ..... I 8
61 Perugia ... L 9
61 Pisa .... H 8
61 Taranto .. V 15
59 Trapani .. L 19
58 Reggio nell 'Emilia ... I 6
58 Marsala .. M 20
57 Ancona ... O 8
54 Cagliari E 17
53 Foggia ... S 13
52 Alcamo .. N 20
51 Prato ..... J 8
50 Andria ... T 13
49 Parma .... H 6
49 Modica .. Q 22
48 Bergamo .. G 4
45 Novara .... D 5
45 Caltagirone Q 21
45 Vicenza .. J 4
44 Reggio di Calabina . S 19
44 Arezzo .... K 9
44 Forli ..... L 7
43 Caltanissetta P 21
43 Rimini .... M 7
43 Salerno .. Q 14
43 Monza .... F 4
42 Cesena .... L 7
42 Carrara ... H 7
42 Barletta .. T 13
42 Corato ... T 13
40 Faenza .... K 7
40 Molfetta . U 13
39 Copparo .. K 6
39 Como ...... F 4
38 Savona .... E 7
38 Sassari ... D 14
38 Asti .... D 6
38 Udine ..... N 3
38 Cremona .. H 5
36 Piacenza .. G 5
35 Pavia ...... F 5
35 Acireale . R 20
35 San Pier d'Arena .. E 7
34 Cerignola S 13
34 Treviso ... L 4
33 Torre del Greco .. P 14
33 Imola ...... K 7
33 Castellamare di Stabia P 14
33 Caserta ... P 13
33 Lecce ..... X 15
32 Vittoria .. P 22
32 Syracuse . R 21
32 Ragusa ... Q 22
32 Catanzaro T 18
32 Trani ..... T 13
32 Casale Monferrate . D 5
31 Vercelli ... D 5
31 Bisceglie . U 13
31 Terni ... M 10
31 Chioggia .. L 5
30 San Severo R 12



Pop.—Thousands.

29 Cortona...L 9
29 Mantua (Mantova) I 5
29 Monte Sau Giuliano M 20
29 Ascoli Piceno..N 10
28 Siena......J 9
28 Torre Annuziata P 14
28 Lodi.......F 5
27 Lugo......K 7
27 Coni (Cuneo)..C 7
26 Citta di Castello L 9
26 Massa.....H 7
26 Chieti....P 11
26 Gubbie....L 9
26 Foliguo..M 10
26 Aderno...Q 20
26 Castro Giovanni... P 21
26 Cascina...H 8
25 Brindisi..X 14
25 Pesaro... M 8
25 Girgenti.O 21
25 Martina Frauca..V 14
25 Fano......N 8
25 Benevento Q 13
25 Spoleto..M 10
25 Teramo..O 10
25 Canicatti.O 21
24 Castelvetrano....M 20
24 Piazza, Armerina....P 21
24 Canoso...T 13
24 Monreale N 19
24 Ruvo.....T 13
24 Avellino .Q 14
24 Partinico N 19
23 Barcelona R 19
23 Aversa...P 14
23 Paterno..Q 21
23 Terlizzi..T 13
23 Iesi (Jesi) N 9
23 Smigaglia (Senigallia) N 8
23 Ostuni...W 14
23 Carpi.......I 6
23 Licata....O 21
23 Macerata .N 9
23 Altamura T 14
23 Noto.....Q 22
23 Monopoli V 14
22 Terranova di Sicilia...P 21
22 Monte Sant' Angelo..T 12
22 Sessa.....O 13
22 Gioja dal Colle....U 14
22 Cosenza..T 17
21 San Remo.C 8
21 Viterbo..K 11
21 Aquila...N 11
21 Fabriano..M 9
21 Iglesias..D 17
21 Maddaloni P 14
21 Voghera.. F 6
21 Argenta.. K 6
20 Francavilla Fontna.W 14
20 Empoli....J 8
20 Bronte...Q 20
20 Porto Maggiore.....K 6
20 Mazzara del Valle....M 20
20 Sciacca..N 21
20 Castellamare M 19
20 Nocera dei Pagani..Q 14
20 Leonforte P 20
20 Busto Arsizio...E 4
20 Velletri..M 13
20 Biella.....D 5
19 Mondovi.. C 7
19 Vittorio...L 4
19 Belluno...L 3
19 Gravina..T 14
19 Camajore.H 8
19 Termini Imerese.O 19
19 Sesto Fiorentino.......J 8
19 Orvieto..L 10
19 Lanciano.Q 11
19 Osimo.... O 9
18 Sarno ... Q 14
18 Massa Marittima......J 9
18 Urbinia...M 8
18 Pinerolo..B 6
18 Bagheria.O 19
18 Fossano...C 6

TURKEY

Area, 65,350 sq. m.
Pop. 6,130,200

CHIEF CITIES.

Pop. Thousands.

113 Constantinople L 8
105 Salonica G 8
81 Adrianople J 7
45 Monastir E 8
30 Skutari ... C 6
20 Gallipoli J 8
20 Uskut .. E 7
20 Yanina . D 9
16 Kirk Kilise K 7
15 Pristina .. E 6

SERVIA

Area, 18,650 sq. m.
Pop. 2,192,882

CHIEF CITIES.

Pop.—Thousands.

59 Belgrade D 4
22 Nish .... E 5
14 Kragujevats E 5
13 Leskovac.
12 Pozarevac E 4
12 Sabac ..... C 4
12 Vranja . F 6
10 Pirot ..... F 6

ROUMANIA

Area, 50,700 sq. m.
Pop. 5,956,690

CHIEF CITIES.

Pop.—Thousands.

28 Bukharest I 4
78 Yassy .... K 1
63 Galatz .... K 3
58 Braila .... K 3
43 Ploesci ... J 4
45 Craiova .. G 4
32 Botosani .. J 1
24 Barlad ... K 2
24 Focsani ... J 3
22 Buzeu ..... J 4
21 Giurgiu ... I 5
20 Piatra .... H 4
19 Husi .... K 2
15 Falticeni .. I 1
15 Pitesti .... H 4

BULGARIA

Area, 38,000 sq. m.
Pop... ..3,744,283

CHIEF CITIES.

Pop.—Thousands.

47 Sofia .. .G 6
41 Philippopolis I 6
37 Rushchuk J 5
28 Varna ..... L 5
25 Tirnova ... I 6
24 Shumla ... J 5
23 Plevna .... H 5
22 Tartar Pazadzik H 6
22 Rasgrad . J 5
21 Kezanlyk I 6
21 Viddin ... F 5
21 Sliven ..... J 6
12 Sistov .... I 5

GREECE

Area, 25,014 sq. m.
Pop. ... 2,433,806

CHIEF CITIES.

Pop. Thousands.

111 Athens . G 11
42 Piraeus . G 11
38 Patras ... E 10
22 Syros .... H 11
21 Trikala .. F 11
18 Corfu .... G 9
18 Hermopolis I 11
16 Volo ...... G 9
15 Larissa . F 9
15 Zante ... D 11
11 Kalamai E 12
13 Pyrgos . E 11
10 Tupolis .. F 11

MONTENEGRO

Area, 3,630 sq. m.
Pop. 228,000

CHIEF CITIES.

Pop. Thousands.

7 Podigorica C 6
4 Niksic .. B 6
5 Dulcigno .. B 7

CRETE

Area, 3,326 sq. m.
Pop. 303,543

CHIEF CITIES.

Pop.—Thousands.

22 Candia .. I 13
21 Kanea ... G 13
9 Retimo . H 13

DENMARK

(Kingdom)
Area 15,388 sq.m. including Färöe Islands, but excluding Greenland and Iceland
Pop. 2,164,770

AMTS.

Aalborg.. D 6
Aarhuus F 7
Copenhagen, see Kjobenhavn G 13
Frederiksborg.. G 13
Hjorring ..C 6
Holbek ....H 11
Island of Bornholm. L 11
Kjobenhavn G 13
Odense ... H 7
Præsto .. I 12
Randers ...E 7
Ribe ..... H 3
Ringkjobing F 2
Soro ....H 11
Svendborg .I 8
Thisted ....D 2
Veile ..... G 5
Viborg .....E 5

CHIEF CITIES.

Pop.—Thousands.
378 Copenhagen (Kjobenhavn) (Capital)..G 15
52 Aarhuus. F 7
40 Odense ..H 8
31 Aalborg..C 7
22 Horsens..G 6
20 Randers..E 6
11 Elsinore..F 14 (Helsingor)
10 Fredericia H 6
10 Kolding..H 5
9 Veile ....G 5
9 Svendborg I 8
8 Viborg ....E 5
8 Ronne.....M 14
[illegible]
7 Slagelse...H 11
7 Nakskov ..J 10
6 Nykjobing J 12
6 Hjorring..B 6
6 Nyborg.....I 9
6 Nestved ...I 12
5 Thisted ...D 3
5 Frederikshavn..B 8
5 Korsor .....I 10
4 Silkeborg. F 5
4 Varde .....H 2
4 Ribe ....H 3
4 Esbjerg ...H 2
4 Assens .....I 6
4 Holbek ...G 12
4 Holstebro E 3
4 Skive.......E 3
4 Frederiksborg..G 13
4 Faaborg ...I 7
4 Nykjobing D 3
4 Kallundborg G 10
3 Rudkjobing J 8
3 Kjoge .....H 13
3 Vordingborg I 13
3 Middelfart H 6
3 Marstal.....J 8
3 Grenaa....E 9
3 Hillerod G 14
[illegible]
3 Maribo ... J 11
2 Ringsted. H 12
2 Kjærteminde H 9
2 Lemvig ...E 2
2 Skanderborg F 7
2 Skagen ...B 8
2 Nexo.......M 15
2 Skjelskor..I 11
2 Ringkjobing F 2
2 Nordby ...H 1
2 Struer.....E 2
2 Herning...F 3
2 Odder ....G 7
2 Stege ....J 13
2 Bogense ..H 7
2 Soro ......H 11
2 Rodby......J 11
2 Frederikssund..G 13
2 Dragor ...H 14
2 Norre Sundby C 7
2 Sæby ....C 8
2 Nyjkobing G 11
2 Store Heddinge I 14
2 Logstor . D 5
2 Stubbekjobing..J 12
2 Ærœskjobing .J 7
2 Præsto....I 13

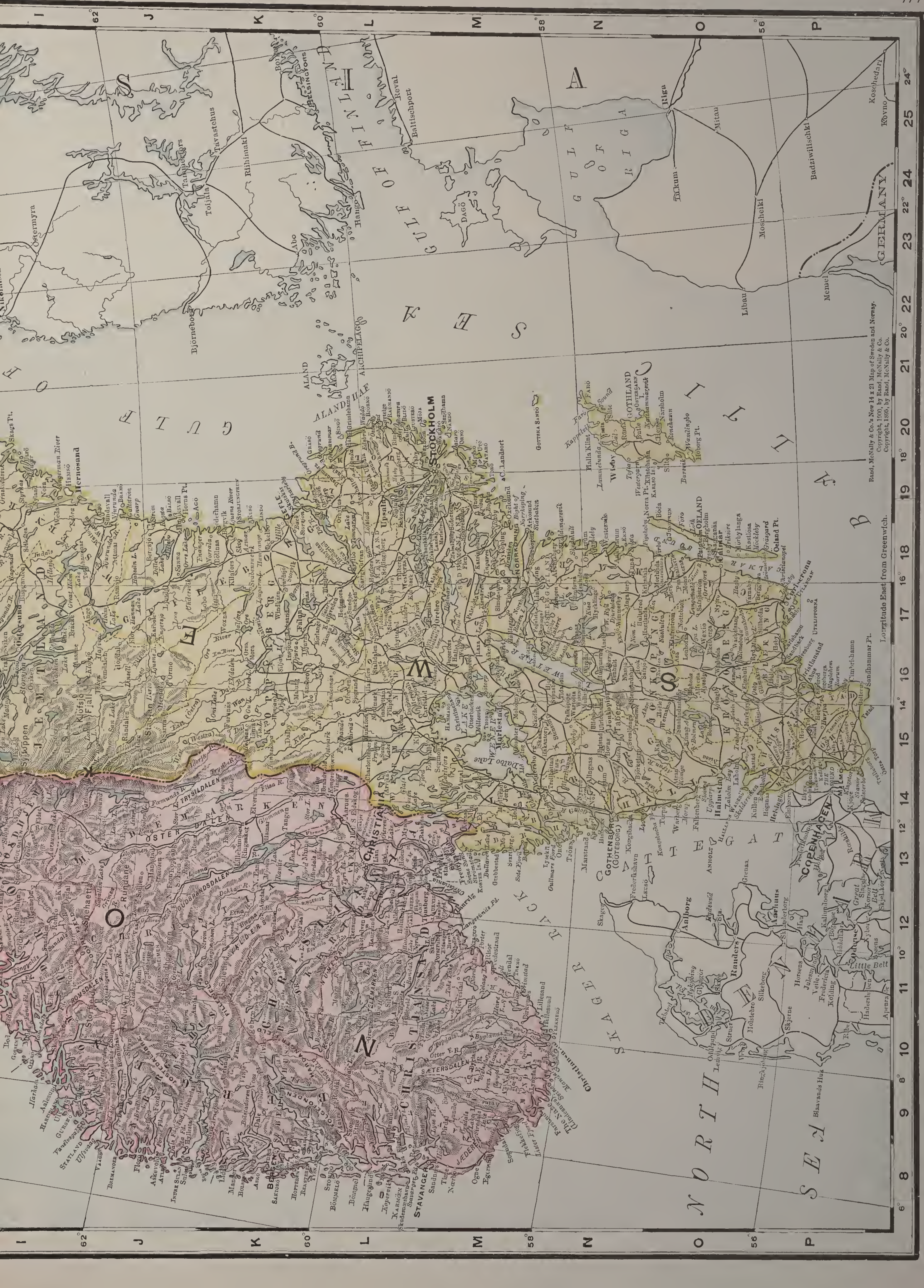
SWEDEN

(Kingdom)

Area 172,876 sq m
Pop......5,136,441

CHIEF CITIES.

Pop. Thousands.	City	
306	Stockholm	L 20
131	Gothenburg (Göteborg)	N 13
65	Malmo	P 14
42	Norrköping	M 18
31	Gefle	K 19
26	Helsingborg	O 14
25	Carlscrona	O 17
24	Upsala	L 19
24	Örebro	L 17
23	Jönköping	N 15
17	Lund	P 15
16	Boras	N 15
16	Halmstad	O 14
16	Sundsvall	I 19
15	Landskrona	P 14
15	Linkoping	M 17
14	Eskilstuna	L 18
14	Neder Kalix	F 25
13	Calmar	O 18
13	Gellivare	D 22
13	Carlstad	L 15
13	Westeras	L 18
11	Söderhamn	J 19
11	Ofver Lulsa	F 24
11	Christianstad	P 16
10	Falun	K 17
10	Uddevalla	M 13
10	Ystad	P 15
10	Nordmaling	H 20
10	Ljusdal	J 17
10	Elfkarleby	K 19
10	Mora	J 16
9	Lulea	F 24
9	Byske	G 23
9	Ockelbo	K 18
9	Westervik	N 18
9	Wisby	N 20
9	Sodertelge	L 19
8	Burtrask	G 22
8	Hernösand	I 20
8	Ranea	F 25
8	Nykoping	M 18
8	Degerfors	G 22
8	Wexio	O 17
7	Oscarshamn	N 18
7	Ekshärad	K 15
7	Tierp	K 19
7	Lycksele	G 19
7	Carlshamn	O 17
7	Christinehamn	L 15
7	Sala	L 18
7	Ostersund	H 17
7	Anundsjo	H 20
7	Wenersborg	M 14
7	Wilhelmina	G 18
7	Lerback	M 17
6	Warberg	N 14
6	Trollhättan	M 14
6	Ofver Kalix	E 25
6	Ludvika	K 17
6	Delsbo	J 18
6	Lidköping	M 15
5	Arvidsjaur	F 21
5	Arboga	L 17
5	Elfsby	F 23
5	Norsjö	G 21
5	Hallestad	M 17
5	Nassjö	N 16
5	Skofde	M 15
5	Hudiksvall	J 19
5	Elfdalen	J 16
5	Ström	H 17
5	Sabra	I 19
5	Pajala	D 25
5	Juckasjarvi	D 23
5	Skara	M 15
5	Ragunda	H 18
4	Asele	G 19
4	Svedala	P 15
4	Ostmark	K 15
4	Enkoping	L 19
4	Umea	H 21
4	Wiby	L 16
4	Osby	O 16
4	Hamrange	K 18
4	Tidaholm	M 16
4	Bjurholm	G 20
4	Hammerdal	H 16
4	Markaryd	O 15
4	Mjolby	M 17
4	Löfanger	G 23
4	Grundsunda	H 21
4	Offerdal	H 16
4	Gnarp	I 19
4	Morlunda	N 18
4	Wäddo	L 21
4	Hvetlanda	N 17
4	Bergsjö	J 18
4	Marlestad	M 15
4	Eksjo	N 17
4	Filipstad	L 15
4	Norrala	J 18
4	Ahus	P 16
4	Amal	L 14
4	Arvika	L 14
4	Alingsas	N 14



NORWAY

(Kingdom)
Area 124,130 sq m
Pop 2,240,032

CHIEF CITIES.

Pop.—Thousands.	
229 Christiania	L 13
72 Bergen	K 7
39 Trondhjem	H 12
30 Stavanger	L 7
23 Drammen	L 12
15 Christiansand	N 9
15 Fredrikstad	L 12
14 Aalesund	I 7
12 Christiansund	H 9
12 Fredrikshald	L 13
11 Sklén	L 11
11 Ringsaker	K 12
10 Laurvig	M 12
10 Eidsvold	K 13
9 Horten	L 12
9 Moss	L 12
9 Elverum	K 13
8 Tonsberg	L 12
8 Hadsel	C 16
8 Voss	K 8
8 Haugesund	L 6
7 Tromsö	B 21
7 Sarpsborg	L 13
7 Lidaas	K 6
6 Orkdal	H 11
6 Vaage	J 11
6 Hamar	K 13
6 Eidskog	K 13
6 Grue	K 14
6 Vaerdalen	H 13
6 Ullensaker	K 13
6 Kongsberg	L 11
5 Manger	K 6
5 Lyngen	B 22
5 Bodö	D 16
5 Vefsen	F 15
5 Kragerö	M 11
5 Skjeberg	L 13
5 Porsgrund	L 11
5 Sandefjord	L 12
5 Aasnes	K 14
5 Hemnes	E 16
5 Nordre Land	K 12
5 Tysnaes	K 7
5 Asker	L 12
5 Vinger	K 14
5 Selbu	H 13
5 Volden	I 8
5 Röros	I 13
5 Lyngdal	M 9
4 Borge	C 15
4 Nordre Fron	J 12
4 Ringebu	J 12
4 Mo	E 16
4 Holt	M 11
4 Beitstader	G 13
4 Gildeskaal	E 15
4 Roken	L 12
4 Opdal	I 11
4 Risor (Oster-rioor)	M 11
4 Sondre Aurdal	K 12
4 Naes	K 11
4 Eldanger	L 11
4 Brandvold	K 11
4 Vik	J 8
4 Indre Holmedal	J 7

RUSSIA

(Empire)
Area, 2,095,616 sq. m.
Pop....106,264,136

PROVINCES.

ABO BJORNEBORG..F 11
Area 9,333 sq. m.
Pop. 430,194

ARCHANGEL P 8
Area 331,640 sq.m.
Pop. 347,589

ASTRAKHAN T 25
Area 91,327 sq. m.
Pop. 994,775

BESSARABIA F 25
Area, 17,619 sq. m.
Pop. .. . 1,933,136

COURTLAND E 16
Area, 10,535 sq. m.
Pop. 672,634

DAGHESTAN T 31
Area, 11,332 sq. m.
Pop....... 586,636

DON COSSACKS P 24
Area 63,532 sq.m.
Pop. 2,575,818

EKATERINOSLAV..L 25
Area, 24,478 sq. m.
Pop.... .2,112,651

ESTHONIA ..G 13
Area, 7,818 sq. m.
Pop.......413,724

GRODNO.... E 19
Area, 14,931 sq. m.
Pop......1,617,859

JAROSLAV..M 15
Area, 13,751 sq.m.
Pop......1,072,478

KALISZ..... B 19
Area, 4,392 sq. m.
Pop....... 846,719

KALUGA ..K 19
Area, 11,912 sq.m.
Pop.... .1,185,726

KASAN.. ... S 17
Area, 24,601 sq. m.
Pop. 2,191,058

KHARKOV...L 23
Area, 21,041 sq.m.
Pop......2,509,811

KHERSON.. I 25
Area, 27,523 sq.m.
Pop. 2,732,832

KIELCE .. B 21
Area, 3,897 sq. m.
Pop. 763,746

KIEV .... H 23
Area, 19,691 sq.m.
Pop. 3,576,125

KOSTROMA .P 15
Area, 32,490 sq.m.
Pop......1,429,228

KOVNO......E 17
Area, 15,692 sq.m.
Pop......1,549,444

KUBAN ......N 28
Area, 36,441 sq.m.
Pop......1,922,773

KUOPIO......I 10
Area, 16,499 sq.m.
Pop. 305,166

KURSK......L 22
Area, 17,937 sq.m.
Pop......2,396,877

LIVONIA....G 15
Area, 18,158 sq.m.
Pop......1,300,640

LOMSHA ....D 19
Area 4,667 sq. m.
Pop. 585,781

LUBLIN.....D 21
Area 6,501 sq. m.
Pop......1,159,463

MINSK ......G 20
Area, 35,293 sq. m.
Pop......2,156,123

MOHILEV....I 19
Area, 18,551 sq.m.
Pop......1,708,041

MOSCOW ...M 17
Area, 12,859 sq.m.
Pop......2,433,356

NIJNI NOVGOROD..P 17
Area, 19,797 sq.m.
Pop......1,600,304

NOVGOROD .L 14
Area, 47,236 sq.m.
Pop......1,392,933

NYLAND....G 12
Area 4,584 sq. m.
Pop. 276,335

OLONETZ...M 11
Area, 57,439 sq.m.
Pop. 366,715

OREL.. .....L 20
Area, 18,042 sq.m.
Pop......2,054,749

ORENBURG X 19
Area, 73,816 sq.m.
Pop......1,609,388

PENZA......Q 19
Area, 14,997 sq.m.
Pop. ... 1,491,215

PERM ....V 13
Area, 128,211 sq.m.
Pop. ...3,003,208

PIOTRKOW..B 20
Area 1,729 sq. m.
Pop......1,469,044

PLOCK ......B 19
Area 4,200 sq. m.
Pop. 556,877

PODOLIA....F 24
Area, 16,224 sq.m.
Pop..... 3,031,513

POLTAVA ...J 23
Area, 19,265 sq. m.
Pop..... 2,794,727

PSKOV ......H 16
Area 17,069 sq. m.
Pop......1,136,540

RADOM......B 20
Area 1,769 sq. m.
Pop. 820,363

RIAZAN ..N 19
Area 16,255 sq.m
Pop. .. 1,827,539

SAMARA.... T 20
Area 58,321 sq.m.
Pop. .. 2,763,478

SARATOV. Q 21
Area 32,621 sq.m.
Pop. . 2,419,884

SIEDLEC.. D 20
Area 5,535 sq. m.
Pop. 775,316

PROVINCES
(Continued)

SIMBIRSK .R 19
Area 19,110 sq.m.
Pop. 1,549,161

SMOLENSK J 18
Area 21,638 sq.m.
Pop. 1,551,068

ST. MICHAELS H 11
Area 8,819 sq. m.
Pop. 186,478

ST. PETERSBURG I 11
Area 20,760 sq.m.
Pop. .. 2,107,691

STAVROPOL Q 28
Area 23,398 sq.m.
Pop. ... 876,298

SUWALKI F 18
Area 4,846 sq. m.
Pop. 604,915

TAMBOV N 20
Area 25,710 sq.m.
Pop. .. 2,715,453

TAURIDA K 26
Area 24,497 sq.m.
Pop. .. 1,443,566

TAVASTEHUS G 11
Area 8,334 sq. m.
Pop. ...285,281

TCHERNIGOV I 21
Area 20,233 sq.m.
Pop. ... 2,321,900

TER. R 30
Area 26,822 sq.m.
Pop. 933,485

TULA....... L 19
Area 11,954 sq.m.
Pop. 1,432,743

TVER .... K 16
Area,25,225 sq m.
Pop.. 1,812,825

UFA ....W 17
Area,47,112 sq. m.
Pop......2,220,497

ULEABORG .H 7
Area,63,957 sq.m.
Pop. 268,226

VIATKA .....S 15
Area,59,329 sq.m.
Pop......3,082,788

VIBORG......I 12
Area, 13,530 sq.m.
Pop. 294,412

VILNA ......F 18
Area,16,421 sq.m.
Pop......1,591,912

VITEBSK ...H 17
Area,17,110 sq.m.
Pop......1,502,916

VLADIMIR..N 17
Area,18,864 sq.m.
Pop......1,570,733

VOLHYNIA .F 21
Area,27,743 sq.m.
Pop......2,997,902

VOLOGDA ...S 11
Ar..155,498 sq. m.
Pop......1,365,587

WARSAW ...B 19
Area 5,623 sq. m.
Pop......1,933,689

WASA .... F 10
Area,16,105 sq.m.
Pop. 446,772

WORONETZ.N 23
Area,25,443 sq.m.
Pop......2,546,255

CHIEF CITIES

Pop.—Thousands.

1133 St. Petersburg..I 13
989 Moscow.L 18
638 Warsaw.B 19
405 Odessa .H 26
315 Lodz ....A 20
256 Riga ....F 16
217 Kiev ....H 22
175 Kharkov L 23
160 Vilna....F 18
137 Saratov Q 21
132 Kasan . S 17
121 Ekaterinoslav. K 25
120 Rostov N 26
113 Astrakhan S 26
111 Tula... L 19
109 Kishenev F 26
95 Nijni Novgorod Q 17
92 Nikolaiev I 26
92 Samara.. T 19
91 Minsk . G 19
81 Woronetz M 21
74 Kovno.. E 17
73 Orenburg W 20
72 Dünaburg (Dvinsk).G 17
71 Jaroslav .N 16
70 Orel ..... L 20
69 Kherson .I 26
66 Vitebsk..H 18
66 Ekaterinodar..N 28
65 Jitomir ..G 22
65 Reval ....F 13
65 Libau.....D 16
61 Bialystok E 19
62 Penza .Q 20
62 Elizabetgrad I 24
60 Kronstadt I 13
59 Krementchug..J 24
56 Tzaritzin Q 24
54 Ivanovo..N 16
54 Berditchev..F 23
53 Tver ...L 16
53 Poltava...J 23
53 Kursk ..L 21
52 Novo Tcherkask O 25
52 Taganrog M 26
51 Sevastopol I 28
50 Lublin .. D 21
50 Ufa ...W 17
50 Kaluga ...L 19
49 Simferopol J 28
48 Tambov. O 20
47 Smolensk J 18
47 Brest Litewski..E 20
47 Grodno .. E 19
45 Perm ..W 14
45 Czenstochowa .A 21
45 Riazan N 19
44 Vladikaukaz R 30
43 Simbirsk S 18
43 Mohilev . H 19
42 Dorpat (Yurlev) G 11
42 Stavropol P 28
41 Kostroma O 15
40 Kostov N 20

ASIA

Aden ....C 8
(British Possession)
Area,...75 sq. m.
Pop. 41,222

Afghanistan (Empire)..E 5
Area, 250,000 sq. m.
Pop. 4,000,000

Arabia ......C 6
(Independent States)
Area, 1,400,000 sq. m.
Pop. 6,000,000

Baluchistan (Empire)..E 6
Ar., 131,855 sq. m.
Pop. 914,551

Bhutan (Kingdom)..H 6
Area, 16,800 sq. m.
Pop. 50,000

Ceylon (British Colony) G 8
Area, 25,332 sq. m.
Pop. 3,578,333

China ..... J 6
(Empire)
Area, 4,376,400 sq. m.
Pop. 426,337,300

Dutch East Indies (Dutch Colony) .K 9
Ar., 736,400 sq. m.
Pop. 36,000,000

French India (French Colony)
Area..200 sq. m.
Pop. 273,748

French Indo-China .... I 7
(French Dependencies)
Ar., 256,000 sq. m.
Pop. 18,230,000

Hongkong (British Colony)...J 6
Area...29 sq. m.
Pop. 283,905

India ....F 6
(Empire)
Area, 1,766,642 sq. m.
Pop. 294,361,056

Japan ....L 5
(Empire)
Ar.. 161,198 sq. m.
Pop. 46,760,815

Korea ....K 5
(Empire)
Area, 82,000 sq. m.
Pop. 10,528,937

Nepal (Kingdom)..G 6
Area, 54,000 sq. m.
Pop. 5,000,000

Oman ....D 6
(Independent State)
Area, 82,000 sq. m.
Pop. 1,500,000

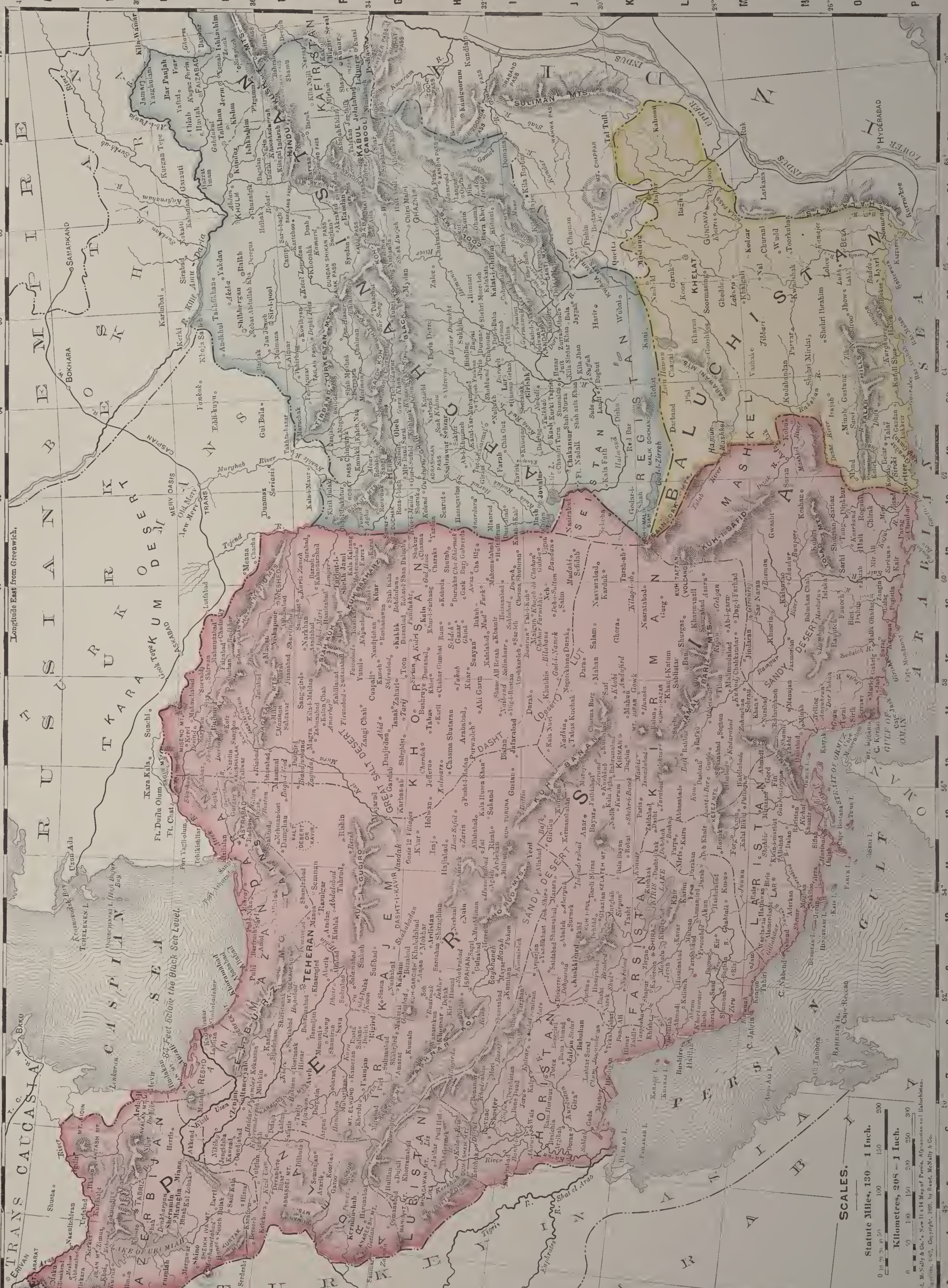
Persia (Kingdom)..D 5
Ar., 628,000 sq. m.
Pop. 7,653,600

Philippine Islands...K 7
(U.S. Possession)
Ar., 127,853 sq. m.
Pop. 6,987,686

Russia, Asiatic (Empire)..H 3
Area, 6,564,778 sq. m.
Pop. 22,697,469

Siam (Kingdom)..I 7
Ar., 220,000 sq. m.
Pop. 5,000,000

Turkey in Asia (Empire)..B 5
Ar., 693,610 sq. m.
Pop. 16,898,700



PERSIA

(Kingdom)

Area, 628,000 sq. m.
Pop. 7,653,600

CHIEF CITIES.

Pop.—Thousands.

220 Teheran. . E 8
200 Tabriz, (Tabreez) . B 2
80 Yezd .... I 11
80 Ispahan . . H 8
50 Barfrush, (Balfrush) . D 9
45 Meshed . . D 16
40 Urumiah . . C 1
40 Kasbin, (Kasvin) . D 7
40 Kermanshahan..... I 11
40 Kirman . J 14
30 Koum..... K 12
30 Reshd, (Rasht) . . C 6
30 Shiraz ... K 9
30 Kashan... G 8
25 Khoi ..... B 2
25 Semnam. E 10
24 Zenjan . . D 5
23 Astrabad D 11
20 Sari .... D 9
20 Burujird. G 5
20 Hamadan. F 5
18 Fesa......L 10
17 Cuchan . C 15
16 Khonsar . . G 7
16 Dizful ... H 5
16 Ardabil....B 5
15 Dilman....B 1
15 Darab ....L 11
15 Bushire . . K 7
15 Maragha . C 3
13 Damghan D 11
12 Bahramabad J 13
11 Minab... M 14
10 Ardistan. . G 9
10 Nishapoor, (Nishapur) D 15
10 Linjah... N 11
8 Bam. . . . K 15
8 Amol ......D 9
8 Shuster ....H 5
8 Binah...... C 8
8 Shahrud . D 11
7 Miana ..... C 4
7 Lar .. .... M 11
7 Sava ...... F 7
7 Shehr-i-Babek J 12
7 Kazeroon. . K 8
7 Sagziabad. . E 7
6 Tabas..... G 14
6 Toon.......F 15
6 Ahar. ..... B 4
6 Babahan... J 7
6 Bostan.... D 12
6 Khar...... F 17
6 Khur...... G 11
6 Abadeh .... I 9
5 Nasratabad K 16
5 Niris...... K 11
5 Ardekan . . H 11
5 Baft ...... K 13
5 Demavend . E 9
5 Kain ..... G 16
5 Kishm ... N 13
5 Fin ...... M 13
5 Naiband. . H 14
4 Koomisheh . I 9
4 Bafk ...... I 12
4 Bint ..... N 16
4 Anguhran N 15
2 Khoramabad D 8
2 Forg ...... L 11
2 Yazdikhast . I 9
2 Ahwaz ..... I 5
2 Choubar. . O 17

AFGHANISTAN

(Empire)

Area, 250,000 sq. m.
Pop....... 4,000,000

CHIEF CITIES.

Pop.—Thousands.

60 Kabul, (Cabool) F 26
60 Kandahar I 22
45 Herab ....F 19
30 Andkhui . C 22
15 Khum.... D 25
15 Sir i Pool D 22
10 Ghazni . G 25 (Ghuznee)
10 Ghuznigik D 25
10 Jelababad F 27
6 Balkh . ... D 23
2 Deh i Haji . I 23

BALUCHISTAN

(Empire)

Area, 131,855 sq. m.
Pop. 914,551

CHIEF CITIES.

Pop.—Thousands.

12 Khelat....L 23
10 Bela ......N 23
3 Bagh ....L 24

TURKEY IN ASIA

(Empire)

Ar...693,610 sq. m.
Pop..... 16,898,700

CHIEF CITIES.

Pop.—Thousands.	City	Map
200	Smyrna	D 2
154	Damascus (Dimeshk)	I 12
145	Bagdad	I 20
127	Aleppo (Haleb)	F 13
120	Beirut	I 11
82	Scutari (Uskudar)	A 5
76	Brusa	B 5
72	Kaisariyeh	D 11
65	Kerbela (Meshed Husein)	J 19
61	Mosul	F 18
60	Manissa	D 3
60	Homs	H 12
55	Urfah	E 14
52	Marash	E 13
51	Jerusalem	K 11
48	Medina	L 23
45	Hamah (Epiphania)	G 12
45	Adana	E 11
44	Konieh (Iconium)	E 8
43	Aintab	E 13
43	Sivas	C 12
39	Erzerum	C 17
36	Aidin	E 3
35	Trebizond	B 15
34	Diarbekr	E 16
30	Tarabulus (Tripoli)	H 11
30	Van	D 19
30	Malatiah	D 14
30	Hillah	J 20
30	Amasia	B 12
30	Kerkook	G 20
30	Tokat	B 12
28	Angora	C 9
27	Mush	D 17
25	Adalia	F 6
25	Bitlis	D 17
25	Ismid	B 6
25	Mardin	E 17
25	Nabulus	J 11
24	Adabazar	B 6
24	Antakia (Antioch)	F 12
23	Ersinjan	C 15
23	Kassaba	D 3
22	Kutaya	C 5
22	Ala-Shehr	D 7
22	Laodicea Latakieh)	G 12
22	Latakieh (Laodicea)	G 12
22	Nazli	E 4
21	Yafa (Jaffa)	J 10
21	Jaffa (Yafa)	J 10
21	Alvali	C 2
21	Ghazzah (Gaza)	K 10
20	Arabkir	D 14
20	Bergama	C 2
20	Isbarta	E 6
20	Karput	D 15
20	Killis	F 13
20	Kirkagatch	C 3
20	Merzivan	B 11
20	Mitylene	C 2
20	Deir	G 16
20	Pergamon (Bergama)	C 2
19	Eski Sher	C 6
19	Egiu	C 14
18	Bassorah (Basra)	L 23
18	Tersoos (Tarsus)	F 11
18	Sugud	B 6
17	Afium-Karahissar	D 6
17	Denizli	E 4
17	Zahleh	I 12

Pop.—Thousands.
16 Kiankary .. B 9
16 Kastamuni .. 9
15 Behesni .. E 14
15 El Khalil (Hebron) K 11
15 Mughla .... E 4
15 Saird ..... D 17
15 Suleimania G 21
15 Yuzgat ... C 10
15 Tireh ..... D 3
14 Kastro .... D 2
13 Balikesri .. C 3
13 Ushak ... D 5
13 Tcharum . B 10
12 Akhissar .. D 3
12 Baiburt .. B 16
12 Hadjim .. E 12
12 Missis .... F 11
12 Suk el Sheyukh L 22
12 Sukia ..... E 3
12 Karahissar B 14
11 Saida (Sidon) I 11
11 Kale-Sultanieh (Chanak Kalessi) .. B 2
11 Samsoon . A 12
11 Boli ...... B 7
11 Biledjik .. B 6
10 Akka (Acre) J 10
10 Biredjik . E 14
10 Rhodes .... F 4
10 Safed ..... J 11
10 Panderma . B 4
10 Khoi Sanjak F 20
10 Bigha ..... B 3
10 Nisibin ... E 17
10 Suverek .. D 8
10 Haifa ..... J 10
10 Sinope ... A 11
10 Bulladan .. D 4
10 Baindir ... B 8
10 Jezireh Ibn Omar .... E 18
10 Amara ... K 23
9 Mersina ... F 10
9 Osmanjik . B 11
9 Ineboli ..... A 9
9 Bartan .... A 8
9 Vezir Kopri A 11
8 Ker Shehr C 10
8 Kerasun .. A 14
8 Tusia ..... B 10
8 Duma ...... I 12
8 Bulavadin . D 6
8 Ainegol .. B 5
8 Bogazlayan C 11
8 Tereboli .. A 14
8 Nazareth .. J 11
8 Es Salt .... J 11
8 Zafaranboli A 8
8 Palu ...... D 16
7 Tabarieh (Tiberias) J 11
7 Sabundja .. B 6
7 Bash Kalaa D 19
7 Karaman (Laranda) E 9
7 Saliki ...... D 4
7 Scalanova .. E 3

SAMOS

(Turkish Principality)

Samos .... E 2
Area ... 180 sq. m.
Pop 53,124

CYPRUS

(Controlled by England)

Cyprus .... H 9
Area 3,584 sq. m.
Pop 237,022

CHIEF CITIES.

Pop.—Thousands.
15 Nicosia (Lefcosia) .... G 9
8 Limasol ... H 9
8 Larnaka .. H 9

INDIA

(Empire)
Area,
1,766,642 sq. m.
Pop....294,361,056

CHIEF CITIES.

Pop.—Thousands.
848 Calcutta E 4
776 Bombay..B 5
509 Madras . D 6
264 Lucknow D 3
235 Rangoon E 6
209 Benares D 4
209 Delhi .....C 3
203 La Hore..B 2
197 Cawnpur D 3
188 Agra .....C 3
186 Ahmadabad B 4
184 Mandalay E 6
172 Allahabad D 4
162 Amritsir .C 2
159 Bangalore C 6
158 Howrah..E 4
153 Poona....B 5
135 Patna ....E 3
131 Bareilly ..C 3
128 Nagpur...C 4
123 Srinagar .C 3
119 Surat ....B 4
118 Meerut...C 3
117 Karachi..A 3
106 Madura ..C 7
105 Trichinopoli C 6
104 Baroda...B 4
95 Peshawar. B 2
91 Dacca .....F 4
90 Jabalpur .D 4
89 Gwalior ..C 3
88 Rawal Pindi B 2
87 Multan ....B 3
87 Indore ....C 4
80 Mirzapur D 4
79 Rampur...C 2
77 Bhopal ...C 4
77 Calicut ...C 6
76 Shahjahanpur C 3
76 Bhagalpur E 4
75 Sholapur. C 5
75 Moradabad C 3
75 Faizabad. . D 3
74 Ajmere... B 3
71 Gaya .. ....E 4
71 Salem ... .C 6
70 Aligarh. ..C 3
69 Haidarabad A 3
68 Mysore....C 6
67 Farukhabad C 3
66 Saharanpur C 4
66 Darbhangah E 3
64 Gorakhpur D 3
60 Jodhpur ..B 3
60 Hubli.... C 5
60 Muttra ...C 3
58 Maulmain E 6
58 Bellary ..C 6
58 Sialkot ...B 2
58 Trivandrum C 7
58 Tanjore. .C 6
57 Negapatam D 7
57 Alwar .....C 3
56 Bhaunagar B 4
56 Jhansi C 4
54 Kolhapur B 5
54 Nawanagar B 4
54 Patiala.... C 3
53 Coimbatore C 6

CEYLON

(British Colony)
Area,
25,333 sq. m.
Pop.. ...3,578,333

CHIEF CITIES.

Pop.—Thousands.
158 Colombo .C 7
38 Pointe de Galle..C 7
34 Jaffna ....C 7
24 Kandy ..D 7
12 Trinkomali D 7

BHUTAN

(Kingdom)
Bhutan .....F 3
Area,
16,800 sq. m.
Pop 50,000

CHIEF CITY.

Punakha.....F 3

NEPAL

(Kingdom)
Nepal ......D 3
Area,
54,000 sq. m.
Pop......5,000,000

CHIEF CITY.

Pop.—Thousands.
50 Khatmandu E 3

CHINA

(Empire)

Area, 4,376,400 sq. m.
Pop. . . 426,337,300

CHIEF CITIES.

Pop.—Thousands.

1300	Peking	B 5
1000	Tientsin	B 5
800	Chang-chou-fu	E 5
800	Hankow	C 4
800	Wuchang	C 4
700	Hang-chow	C 5
650	Foochow	D 5
586	Shanghai	C 6
500	Canton	E 4
500	Suchou	C 6
400	Han-yang	C 4
400	Lanchou-Fu	B 2
300	Chang-sha	D 4
300	Chung king	D 3
255	Ningpo	D 6
200	Yen-ping	D 5
150	Nanking	C 5
140	Chinkiang	C 5
137	Victoria	E 4
100	Kaifung	C 4
96	Amoy	E 5
81	Wu-hu	C 5
80	Wenchow	D 6
79	Macao	E 4
73	Shashi	C 4
60	Huchou	C 6
60	Newchwang	A 6
60	Yenchou	B 5
52	Wu-chou	E 4
50	Kung-cheng	B 3
40	Kiung-chou	F 3
35	Chifa	B 6
35	Swatow	E 5

KOREA

(Kingdom)

Area, 82,000 sq. m.
Pop. 10,000,000

CHIEF CITIES.

Pop.—Thousands.

197	Soul	B 7
64	Chhung-ju	B 7
59	Haiju	B 7
55	Chin ju	B 7
45	Tai-ku	B 7
40	Phyongyang	B 7
37	Chon ju	B 7
32	Wi-ju	B 7
27	Chemulpo	B 7
23	Kwang-ju	C 7
17	Fusan	B 7

SIAM

(Kingdom)

Area, 220,000 sq. m.
Pop. . . . 5,000,000

CHIEF CITIES.

Pop. Thousands.

300	Bangkok	G 1
7	Nong-Khal	F 2
6	Khorat	F 2

FRENCH INDO-CHINA

Area, 256,000 sq. m.
Pop. 18,230,000

CHIEF CITIES.

Pop.—Thousands.

150	Hanoi	E 3
50	Hue	F 3
50	Pnompenh	G 2
43	Kwangyen	E 3
38	Saigon	G 3
28	Banam	G 3
15	Bink-dak	G 3
10	Haifong	E 3
10	Udong	G 2
9	Luang Prabang	F 2

JAPAN

(Empire)
Area, 161,198 sq. m.
Pop.....43,760,815

KENS OR PERFECTURES

Aichi	S 12	Pop. 1,591,356
Akita	H 10	Pop. 775,077
Aomori	H 8	Pop. 612,171
Chiba	W 11	Pop. 1,273,389
Ehime	M 14	Pop. 997,468
Formosa	T 16	Pop. 3,000,000
Fukui	Q 11	Pop. 633,840
Fukuoka	J 14	Pop. 1,362,777
Fukushima	W 8	Pop. 1,057,971
Gifu	S 10	Pop. 996,062
Gumma	U 9	Pop. 774,604
Hiroshima	L 12	Pop. 1,436,410
Hyogo	O 11	Pop. 1,667,226
Ibaragi	W 10	Pop. 1,131,556
Ishikawa	R 10	Pop. 781,784
Iwate	I 9	Pop. 720,386
Kagoshima	I 17	Pop. 1,104,631
Kanagawa	V 11	Pop. 776,685
Kochi	M 14	Pop. 616,549
Kumamoto	J 16	Pop. 1,151,401
Kyoto	P 11	Pop. 931,560
Mie	R 13	Pop. 996,411
Miyagi	W 6	Pop. 835,830
Miyazaki	K 16	Pop. 454,730
Nagano	T 10	Pop. 1,237,627
Nagasaki	H 14	Pop. 821,323
Nara	Q 13	Pop. 538,507
Niigata	U 8	Pop. 1,812,272
Oita	J 15	Pop. 839,485
Okayama	N 12	Pop. 1,132,000
Okinawa	C 18	Pop. 453,550
Ozaka	P 11	Pop. 1,311,909
Shiga	Q 11	Pop. 712,024
Shimane	M 12	Pop. 721,418
Shizuoka	T 12	Pop. 1,199,805
Tochigi	V 9	Pop. 788,324
Tokushima	O 14	Pop. 699,398
Tokyo	V 10	Pop. 1,507,642
Tottori	N 11	Pop. 418,929
Toyama	S 9	Pop. 785,554
Wakayama	P 13	Pop. 681,572
Yamagata	W 6	Pop. 829,210
Yamaguchi	K 13	Pop. 986,161
Yamanashi	U 11	Pop. 498,539

CHIEF CITIES.

Pop.—Thousands.		
1440	Tokyo (Capital)	W 11
821	Osaka	Q 12
353	Kyoto (Saikyo)	Q 12
244	Nagoya	S 12
216	Kobe	P 12
194	Yokohama	V 11
122	Hiroshima	L 13
107	Nagasaki	H 15
84	Kanazawa	R 9
83	Sendai	X 6
66	Fukuoka	I 14
64	Wakayama	P 13
62	Tokushima	O 13
61	Kumamoto	J 15
60	Toyama	S 9
58	Okayama	N 12
53	Kagoshima	I 17
53	Niigata	U 7
50	Sakai	P 13
44	Fukui	R 10
13	Akama-ga-seki	J 14

Pop.—Thousands.		
42	Shizuoka	T 12
38	Kofu	U 11
37	Matsuyama	M 14
37	Kochi	N 11
35	Yamagata	W 6
35	Himeji	P 12
35	Hirosaki	H 8
35	Matsuye	M 11
34	Maebashi	U 9
34	Takamatsu	O 13
34	Otsu	Q 12
34	Mito	X 9
33	Tsu	R 12
33	Morioka	I 9
33	Saga	I 15
32	Utsu-no-miya	W 9
31	Takaoka	S 9
31	Matsumoto	T 10
31	Nagano	T 9
31	Gifu	R 11
31	Takasaki	V 10
31	Yonezawa	W 7
31	Nara	Q 12
29	Akita	G 9
29	Wakamatsu	V 8
29	Kurume	J 14
28	Tottori	O 11
28	Aomori	H 8
28	Yamada	R 13
28	Kokura	J 14
26	Chiba	W 11
25	Choshi	X 10
25	Moji	J 13
25	Yokka-ichi	R 12
25	Marugame	N 13
25	Atsuta	S 12
25	Shuri	D 17
25	Yokosuka	W 11
24	Uyeda	T 9
23	Hachioji	V 11
23	Hakata	I 14
22	Tochigi	V 9
22	O-no-michi	M 13
22	Sakata	G 11
22	Toyohashi	S 12
22	Fushimi	O 12
21	Ashikaga	V 9
21	Akashi	P 12
21	Hagi	K 13
21	Fukushima	W 7
20	Tsuru-ga-oka	G 11
20	Takata	T 8
20	Kuwana	R 12
19	Yanagawa	I 15
18	Muya	O 13
18	Hikone	R 11
18	Shimabara	I 15
17	Shinagawa	W 11
16	Ogaki	R 11
16	Nagaoka	U 8
16	Kawagoe	V 10
15	Nakatsu	J 14
15	Oita	K 15
15	Ishi-no-maki	X 6
15	Fukuyama	M 13
15	Tsuyama	N 12
14	Odawara	V 11
14	Takayama	S 10
14	Imabaru	M 13
13	Iida	T 11
13	Hiromura	L 13
13	Koriyama	Q 12
13	Okazaki	S 12
13	Hamamatsu	T 12
13	Senju	W 10
13	Kishiwada	P 13
13	Ueno	R 12
13	Komatsu	R 9
13	Ama-ga-saki	P 12
13	Shibata	V 7
13	Yamaguchi	K 13
13	Matsuzaka	R 13
12	Yonago	N 11
12	Kanagawa	V 11
12	Tsuruga	R 11
12	Tokuyama	K 13
11	Aikawa	T 6
11	Uotsu	S 9
11	Usuki	K 15
11	Nishi-no-miya	P 12
11	Fukuyama	G 7
11	Kure	M 13
11	Kwanonji	N 13
11	Uwajima	L 15
11	Murakami	V 6
11	Funabashi	W 11
11	Hachi-no-he	I 8
11	Himi	S 9
11	Shinjo	H 11
10	Kuma-ga-ya	V 10
10	Numadzu	U 12
10	Iwakuni	L 13
10	Noshiro	G 9
10	Funatsu	S 10
10	Miyako-no-jo	J 17
10	Yatsushiro	J 16
10	Wajima	R 8
10	Minato	X 9
10	Ono	R 10
10	Omura	I 15
10	Obama	Q 11
10	Shingu	Q 14
10	Etajima	L 13
10	Shirakawa	W 8
10	Ichi-no-miya	R 11

ISLAND OF LUZON

(United States Dependency)

PROVINCES

Abra .... C 3
Ambos Camarines .... G 11
Albay .... I 12
Bataan .... B 9
Batangas .... C 11
Benguet .... C 6
Bulacan .... D 9
Cagayan .... D 3
Cavite .... C 10
Ilocos Norte .... C 2
Ilocos Sur .... B 4
Isabela .... E 5
Laguna .... D 10
Lepanto Bontoc .... C 4
Manila .... I 4
Nueva Ecija .... C 7
Nueva Vizcaya .... D 6
Pampanga .... C 8
Pangasinan .... C 7
Rizal .... D 9
Sorsogon .... I 13
Tarlac .... B 8
Tayabas .... F 11
Union .... B 5
Zambales .... A 7

CHIEF CITIES.

Pop. Thousands.

38 Lipa .... D 11
34 Laoag .... C 2
25 Camiling .... B 7
23 S. Pablo .... D 10
22 Manila .... C 9
22 Tabaco .... I 12
22 Lingayen .... B 6
21 Urdaneta .... C 7
20 Dagupan .... B 6
20 Guinobatan .... I 12
20 Narvacan .... B 4
20 Batac .... C 2
19 Iriga .... H 12
19 Lubao .... C 9
19 Nabua .... H 12
19 Candon .... B 4
18 Nueva Caceres .... H 11
18 Ligao .... I 12
17 Libmanan .... G 11
17 Calasia .... B 6
16 Binmaley .... B 6
16 Cuyapo .... C 7
16 Tuguegarao .... E 3
16 S. Fernando .... B 5
16 Mangaldan .... B 6
16 Boac .... E 12
16 Dingras .... C 2
16 Gubat .... J 13
15 Vigan .... B 3
15 Victoria .... C 7
15 S. Miguel .... D 8
15 Tayabas .... D 10
15 Bacarra .... C 2
15 Malasiqui .... B 7
15 Bacon .... J 12
14 Macabebe .... C 9
14 Bacacay .... I 12
14 Camalig .... I 12
14 Albay .... I 12
14 Calumpit .... C 9
14 Gerona .... C 7
14 S. Fernando .... C 8
14 Sorsogon .... J 13
13 Bacolor .... C 9
13 Bulan .... I 13
13 Daet .... G 10
13 Paniqui .... C 7
13 Bangued .... C 3
13 Asingan .... C 6
13 Mangataren .... B 7
13 Paoay .... C 2
13 Villasis .... C 7
13 Concepcion .... C 8
13 Malolos .... C 9
13 Bagabag .... D 5
13 Badoc .... C 3
12 Sariaya .... D 11
12 Tarlac .... C 8
12 Mauban .... E 10
12 Aliaga .... C 7
12 Naguilian .... B 5
12 S. Juan .... D 11
12 Candaba .... C 7
12 Bulacan .... C 9
12 Indang .... C 10
11 Oas .... I 12
11 Gapan .... C 8
11 Pasig .... D 9
11 S. Juan .... B 5
11 Bayambang .... B 7
11 Guagua .... C 9
11 Pozorubio .... C 6
11 Bacoor .... C 10
11 S. Nicolas .... C 2
11 Agoo .... B 6
11 Angeles .... C 8
10 Sta. Barbara .... B 7
10 Alaminos .... B 6
10 Nagcarlang .... D 10
10 St. Luis .... C 11
10 Baoang .... B 5
10 Balaoang .... B 5
10 Bangar .... B 5
10 S. Isidro .... C 7
10 San Nicolas .... C 6
10 Lagonoy .... I 11
10 Buhi .... I 12
10 Tiui .... I 12
10 Tiaong .... D 11
9 Santa Tomas .... D 10
9 Vintar .... C 2
9 Echague .... E 5
9 Lucena .... E 11
9 Naic .... C 10
9 Sinait .... B 3
9 Binangonan .... D 10
9 S. Jose .... D 11
9 Virac .... J 11
9 Bagnotan .... B 5
9 Cabugao .... B 3
9 Sta. Cruz .... C 10
9 Santa .... B 3
9 Rosales .... C 7
9 Lopez .... F 11
9 Magalang .... C 8
9 Tagudin .... B 5
8 Balayan .... C 11
8 Bocaue .... C 9
8 Abulug .... D 1
8 Porac .... B 8
8 S. Jose .... I 11
8 Bangui .... C 1
8 Mariquina .... D 9
8 Solana .... E 3
8 Calamba .... D 10
8 Aringay .... B 6
8 Caramoan .... I 11
8 Pilar .... I 13
8 Polangui .... I 12
8 Sta. Lucia .... B 4
8 Casiguran .... J 13

AFRICA

Area, 11,511,307 sq. m.
Pop. ...127,038,370

COUNTRIES.

ABYSSINIA .. G 4 (Kingdom)
Area, 150,000 sq. m.
Pop..... 3,500,000

ALGERIA D 2 (French Colony)
Area, 184,474 sq. m.
Pop.......4,739,231

ANGOLA .E 7 (Portuguese Colony)
Area, 484,800 sq. m.
Pop......4,119,000

AZORES ISLANDS..A 2 (Portuguese Possessions)
Area, 922 sq. m.
Pop. 256,474

BASUTO-LAND F 9 (British Colony)
Area, 10,293 sq. m.
Pop. 348,626

BECHUANA-LAND..F 8 (British Protectorate)
Area, 275,000 sq. m.
Pop. 120,776

CANARY ISLANDS .B 3 (Spanish Province)
Area, 2,807 sq. m.
Pop. 358,564

CAPE OF GOOD HOPE..F 9 (British Colony)
Area, 276,995 sq. m.
Pop......2,405,552

CAPE VERDE ISLANDS..B 6 (Portuguese Colony)
Area, 1,480 sq. m.
Pop. 147,424

CONGO INDEPENDENT STATE.....F 5 (Belgian Colony)
Area, 900,000 sq. m.
Pop.....30,000,000

EAST AFRICA G 7 (Portuguese Colony)
Area, 301,000 sq. m.
Pop. 3,120,000

EGYPT.......F 3 (Turkish Tributary State)
Area, 400,000 sq. m.
Pop......9,731,405

ERITREA .. .G 4 (Italian Colony)
Area, 88,500 sq. m.
Pop. 450,000

FRENCH GUINEA..B 4 (Rivières du Sud)
Area, 95,000 sq. m.
Pop......2,200,000

FRENCH CONGO and GABUN ... E 6 (French Territory)
Area, 450,000 sq. m.
Pop.....10,000,000

GERMAN EAST AFRICA .G 6 (German Protectorate)
Area, 384,000 sq. m.
Pop......6,766,428

GERMAN SOUTH-WEST AFRICA E 8 (German Protectorate)
Area, 322,450 sq. m.
Pop. .... .200,000

KAMERUN... E 5 (German Protectorate)
Area, 191,130 sq. m.
Pop. ...3,500,000

LAGOS.......D 5 (British Colony)
Area, 28,910 sq. m.
Pop. 1,500,000

LIBERIA . .C 5 (Republic)
Area, 35,000 sq. m.
Pop. 2,060,000

MADAGASCAR H 7 (French Colony)
Area, 227,750 sq. m.
Pop. 2,505,237

MADEIRA ISLANDS..B 2 (Portuguese Province)
Area...505 sq. m.
Pop....... 150,528

MOROCCO.... C 2 (Empire)
Area, 219,000 sq. m.
Pop. 5,000,000

NATAL G 9 (British Colony)
Area, 36,170 sq. m.
Pop. 929,970

NIGERIA, with Lagos Proct. D 5 (British Protectorate)
Area, 400,000 sq. m.
Pop. 25,000,000

ORANGE RIVER COLONY .F 8 (British)
Area, 48,326 sq. m.
Pop. . 207,503

RHODESIA . .F 7 (British Protectorate)
Northern Rhodesia
Ar. 251,000 sq. m.
Pop. 650,000
Southern Rhodesia
Ar. 144,000 sq. m.
Pop. ...526,925

RIO DE ORO and ADRAR B 3 (Spanish Colony)
Area, 243,000 sq. m.
Pop. . 100,000

SENEGAL B 4 (French Colony)
Area, 80,000 sq. m.
Pop. . 1,180,000

SIERRA LEONE B 5 (British Colony)
Area, 4,000 sq. m.
Pop....... .76,655

SIERRA LEONE B 5 (British Protectorate)
Area, 30,000 sq. m.
Pop. ... 1,000,000

SOMALI-LAND H 5 (British Protectorate)
Area, 68,000 sq. m.
Pop. 500,000

SWAZI-LAND G 8 (British)
Area, 8,500 sq. m.
Pop. 65,000

TRANSVAAL COLONY..F 8 (British)
Area, 111,196 sq. m.
Pop.. . 1,268,716

TRIPOLI AND BARKA ...E 3 (Bengazi) (Turkish Province)
Area, 398,900 sq. m.
Pop. ...1,300,000

TUNIS ....D 2 (French Colony)
Area, 51,000 sq. m.
Pop......1,900,000

TUNIS

(French Protectorate)
Area 51,000 sq. m.
Pop. 1,900,000

CHIEF CITIES.

Pop.—Thousands.
153 Tunis .... W 2 (Capital)
15 Kairwan .. V 3
10 Sfax ...... W 4
10 Susa ...... W 3
8 Bizerta ..... V 1
8 Nabel ..... W 2
6 Hammamet W 2
5 El Maider V 3
2 Gafsa ...... U 4

ALGERIA

(French Colony)
Area, 184,474 sq. m.
Pop. 4,739,556

PROVINCES.

ALGIERS ...... O 3
Area 65,929 sq. m.
Pop. 1,641,210

CONSTANTINE S 3
Area 73,929 sq. m.
Pop. 1,990,992

ORAN .... M 4
Area 44,616 sq. m.
Pop. 1,107,354

CHIEF CITIES.

Pop.—Thousands.
96 Algiers .... P 2 (Capital)
85 Oran .... L 3
51 Constantine R 2
34 Tlemcen . K 4
34 Bona ..... T 2
30 Gardaia ... Q 6
28 Blidah ..... P 2
22 Philippeville S 2
22 Sidi Bel Abbes .. L 3
11 Dellys ...... P 2
9 Mascara ... M 3
8 Tenez ..... N 2
8 El Wady ... S 5
7 Biskra ..... R 4
6 Mostaganem L 2
5 Boufarik .. P 2
5 Aumale .... P 2
4 Setif .... R 2
4 Medeah .... O 2
4 Berrian ..... P 6
3 Bougie ...... R 2
3 Guelma .... T 2
3 Milianah ... O 2
3 Cherchel ... O 2
3 Laghouat .. O 5
3 Mila .... S 2
2 Batna .... S 3
2 Koleah ..... O 2
2 Tebessa .... T 3
2 Djidjelli ... R 2

MOROCCO

(Empire)
Area, 219,000 sq. m.
Pop. 5,000,000

CHIEF CITIES.

Pop.—Thousands.
140 Fez .... G 4 (Capital)
56 Mekinez .. G 5
50 Morocco . E 7
30 Tangier ... G 3
27 Rabat ..... F 5
10 Ceuta ..... G 3 (Spanish)
1 Azamor .... D 5

EGYPT

(Turkish Tributary State.)

Area, 400,000 sq. m.
Pop. ..9,734,405

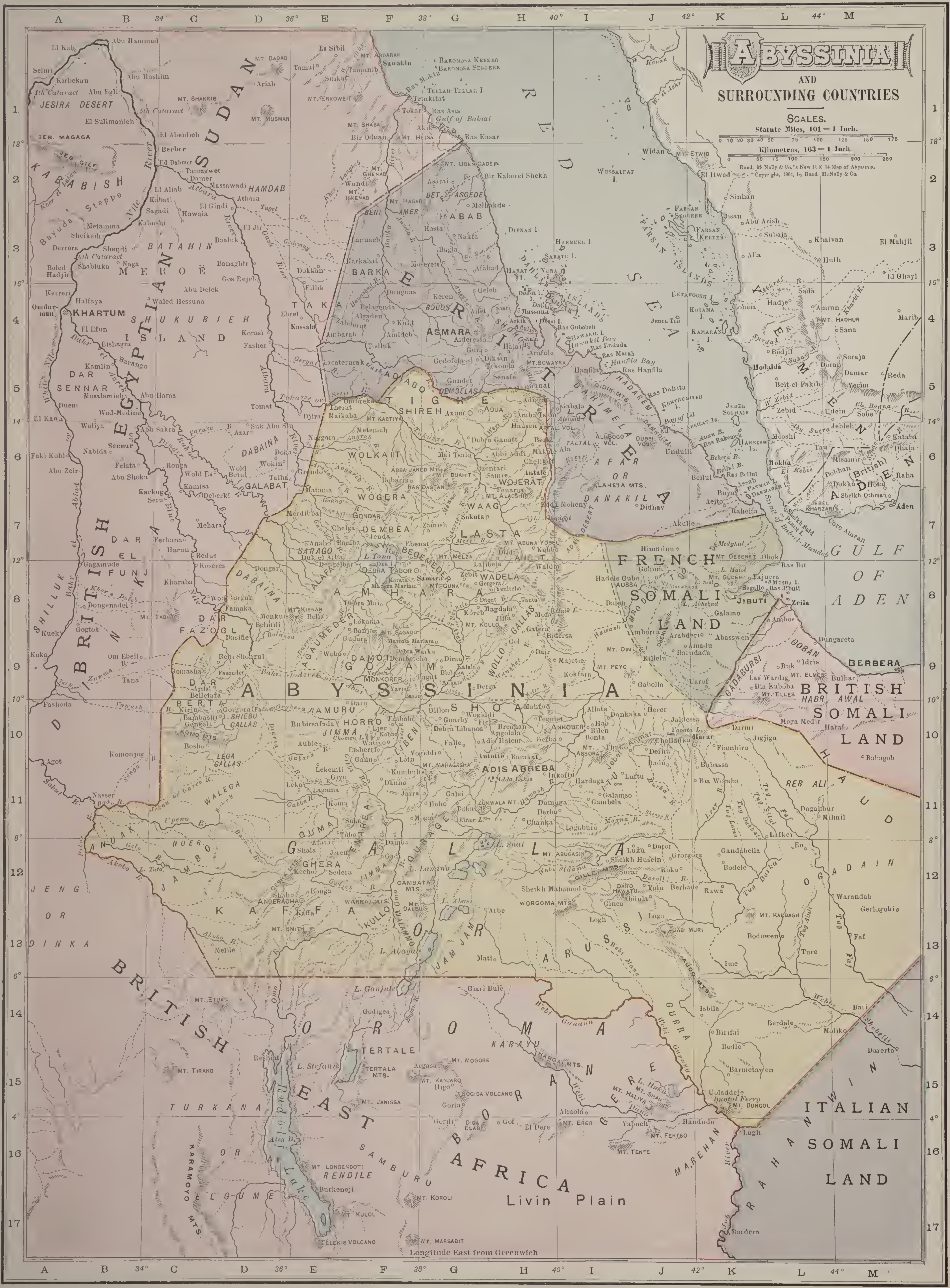
CHIEF CITIES.

Pop.—Thousands.

570 Cairo ... E 5
320 Alexandria A 2
57 Tanta ... E 3
42 Port Said. I 2
42 Siout ... G 8
36 Mansura . F 2
36 Zagazig ..F 4
33 Fayoum, Medinet el. D 8
32 Damietta . G 1
31 Mehallet el Kebir . E 3
27 Damanhur C 2
27 Keneh ..... I 9
20 Mine.... D 11
17 Rosetta ... C 1
16 Menuf .... D 4
15 Girgeh .. H 9
14 Takhta.... G 8
13 Manfalut. G 7
11 Gizeh E 5
11 Mit Gamr E 3
11 Zifte...... E 3
11 Melawi .. G 7
11 Abû Tig ..G 8
11 Sers el Liyana E 4
11 Kus ..... I 9
11 Suez .... I 6
10 Fua .... C 2
10 Beni-Suef. E 8
10 Tala....... D 4
9 Esne ...... I 10
8 Menzaleh .. H 2
8 Benha-El-Asl......... E 4
8 Bardis..... H 9
8 Farshiut... H 9
7 Belbeis..... F 4
7 Kerdassa .. E 5
7 Desûk ..... C 2
6 Rahmaniye C 2
6 Nabaro..... F 2
6 Edfu ..... I 10
6 Etku .... B 2
6 Abusir..... E 6
5 Talka ...... F 2
5 Fareskur... G 2
5 Es Semhellâwên .... F 3
5 Hu .... H 9
5 Mehallet Ziyad.. E 2
5 Shirbîn ... F 2
5 Gisa .... D 4
4 Denderah .. I 9
4 Sael Hager. D 3
4 Semenud . E 3
4 Ramleh ... A 2
4 Beltim ...... E 1
4 Mit Bedr Halawa.. E 3
4 Kebir, Abou G 3
4 Roda ..... G 7
4 Belkas ..... E 2
4 Battikh, Kafr el.. F 1
4 Mehallet Damenna.. F 2
4 Mehallet Menuf. D 3
4 Asfûn ..... I 10
3 Sidfa ..... G 8
3 Ismailia.... H 4
3 Borden .... F 4
3 Embaba, Kûfur.. E 5
3 Mataya... D 10
3 Qotûr ..... D 3
3 Girga, Abû D 10
3 Negela, En. D 3
3 Atû.. ..... F 7
3 Ibrahimiya, El.. F 3
3 Degua ..... E 4
3 Samhud .... H 9
3 Amrus ..... D 4
3 Hanut ..... E 3
3 Saba, Birket es . E 4
3 Abukir .... B 2
2 Shubra Khet D 2
2 Naua ...... E 5
2 Selamoun . D 3
2 Derut ..... C 2
2 Zabel, Abu. F 5
2 Sir, Abu .. E 3
2 Burg Mghezil C 1
2 Bassus ..... E 5
2 Saqiet Musa G 7
2 Karnak ..... I 9
2 Mit Demses E 3
2 Berimbal... C 2
2 Facus ..... G 3
2 Mahdiya F 3
2 Mehallet Sa D 3
2 Masara, El. F 6
2 Behbit el Hager . E 2
1 Kels, Abu D 4
1 Tira ... E 2
1 Mit Hawai . E 3
1 Madi Abu E 1
1 Mehallet Ruh E 3
1 Hassan, Beni G 7
1 Mit Halfeh E 5
1 Salama, Beni . D 5
1 Ghâlib, Abû F 1
1 Akhmâs, El D 4
1 Arin, El ... G 3
1 Ebshan ... E 2
1 Mandara, El A 2
1 Samalut . D 10

Pop. — Hundreds.

9 Et Tawila G 4
8 Wasta, El . E 7
8 Mehallet Kêt B 2
8 Hammâd, Abu .. G 4
7 Ghâlib, Kafr Abû F 1
7 Alqâm . D 4
1 Defrlya, Kafr D 2
1 Harâra ... C 3
3 Sebtâs, Kafr E 3
1 Mahsameh. H 4



ABYSSINIA

(Kingdom)
Ar. 150,000 sq. m.
Pop. 3,500,000

DIVISIONS

Amhara . . F 8
Galla. . . . G 12
Gojam. . . . . F 9
Kaffa. . . . . D 13
Lasta . . . . . G 7
Shoa. . . . . . G 10
Tigre . . . . . G 5

CHIEF CITIES.

Pop.—Thousands.
35 Harrar. . K 10
10 Adis Abbeba H 11
7 Ankober . I 10
5 Gondar F 7
5 Axum . . G 5
4 Madera Mariam . . . . F 8
3 Adua . . . H 5
2 Sokota . G 7
1 Antalo. . . . H 6
Besso . . . . F 9
Debra, Tabor F 8
Magdala. . H 8
Makale . . . H 6

BRITISH EGYPTIAN SOUDAN

Ar. . 950,000 sq. m
Pop. 2,000,000

CHIEF CITIES.

Pop.—Thousands.
48 Omdurman A 4
8 Khartum . A 4
Berber . . . C 2
Kassala . E 4
Sawakin. . F 1

BRITISH SOMALILAND

(British Protectorate)
Area . 60,000 sq. m.
Pop. 300,000

CHIEF CITIES.

Pop.—Thousands.
30 Berbera. M 9
15 Zeila. . . . . L 8
12 Búlhar. . M 9

ERITREA

(Italian Colony)
Area 88,500 sq. m.
Pop. 450,000

CHIEF CITIES.

Pop.—Thousands.
8 Massaua. . H 4
Asmara. . . G 4

FRENCH SOMALILAND

(French Protectorate)
Area 46,000 sq. m.
Pop. 200,000

CHIEF CITIES.

Pop.—Thousands.
15 Jibuti . . . K 8
Obok. . . . . L 7

SOUTH AFRICA

TRANSVAAL COLONY

(British)
Area, 111,196 sq. m.
Pop. 1,268,716

CHIEF CITIES.

Pop.—Thousands.
102 Johannesburg .. F 15
10 Pretoria .. E 15

SWAZILAND

(British)
Area 8,500 sq. m.
Pop. 65,000

CHIEF CITIES.

Derby ...... F 18
Ditin .... F 18
Lotiti .... F 18

ORANGE RIVER COLONY

(British)
Area 48,326 sq. m.
Pop. 207,503

CHIEF CITIES.

Pop.—Thousands.
1 Jagers Fontein .. I 12
3 Bloemfontein I 13
2 Harrismith H 15

NATAL

(British Colony)
Area 36,170 sq. m.
Pop. 929,970

CHIEF CITIES.

Pop.—Thousands.
39 Durban ... I 18 (Port Natal)
25 Pietermaritzburg .. I 17

CAPE OF GOOD HOPE

(British Colony)
Ar. 276,995 sq. m.
Pop. 2,405,552

COLONY AND DEPENDENCIES.

British Bechuanaland F 9
Area 51,424 sq. m.
Pop. 84,210
Cape Colony L 9
Ar. 206,860 sq. m.
Pop. 1,486,261
E. Griqualand .. J 15
Area 7,594 sq. m.
Pop. 222,459
Pondoland K 16
Area 3,918 sq. m.
Pop. 202,809
Tembuland K 15
Area 4,117 sq. m.
Pop. 231,151
Transkei .. L 15
Area 2,552 sq. m.
Pop. 177,647
Walfisch Bay B 1
Area .. 430 sq. m.
Pop. 1,015

CHIEF CITIES.

Pop. Thousands.
51 Cape Town M 5
29 Kimberley H 11
23 Port Elizabeth M 12
10 Grahamstown .. M 13
10 Beaconsfield .. H 11
8 Paarl ...... M 6
7 King Williamstown L 14
7 E. London M 15
6 Graaf Reinet L 11
5 Worcester M 6
5 Utenhage M 12
4 Cradock .. L 12
4 Oudtshoorn M 9
4 Queenstown K 13
4 Simons Town N 5
3 Stellenbosch M 5
3 Beaufort W. L 9
2 Georgetown N 9
Vryburg F 11
Mafeking E 12
Taungs G 11
Kuruman G 10

BASUTOLAND

(British Colony)
Area 10,293 sq. m.
Pop. 348,626

CHIEF CITIES.

Pop.—Hundreds.
8 Maseru .. I 14
Mafeteng ... I 14

BECHUANALAND

(British Protectorate)
Area, 275,000 sq. m.
Pop. 120,776

CHIEF CITIES.

Pop.—Thousands.
25 Palapye .. B 14
Macloutsie A 15
Shoshong .. B 12

OCEANIA

COUNTRIES.

AUSTRALIA..F 5
(British Colony)
Area, 2,972,906 sq. m.
Pop......3,771,715

BISMARCK ARCHIPELAGO D 6
(German Protectorate)
Area, 20,000 sq. m.
Pop. 188,000

CAROLINE ISLANDS..C 6
(German Colony)
Area, 560 sq. m.
Pop. 36,000

COOK ISLANDS E 11
(British Protectorate)
Area.. 142 sq. m.
Pop......... 8,400

FIJI..........E 9
(British Colony)
Area, 8,045 sq. m.
Pop. 120,124

GILBERT ISLANDS..D 9
(British Protectorate)
Area 166 sq. m.
Pop........ 35,200

GUAM ......B 6
(U.S. Possession)
Area...225 sq. m.
Pop. 10,000

HAWAII .....H 4
(U. S. Territory)
Area, 6,449 sq. m.
Pop. 154,001

KAISER WILHELM'S LAND D 6
(German Protectorate)
Area, 70,000 sq. m.
Pop 110,000

MARIANNE ISLANDS..B 6
(German Colony)
Area ...50 sq. m.
Pop. 1,000

MARQUESAS ISLANDS..F 12
(French Colony)
Area ..480 sq. m.
Pop. 4,450

MARSHALL ISLANDS..C 8
(German Protectorate)
Area...150 sq. m.
Pop. 13,000

MIDWAY ISLANDS..A 10
(U.S. Possession)

NEW CALEDONIA..H 2
(French Colony)
Area, 6,000 sq. m.
Pop. 51,033

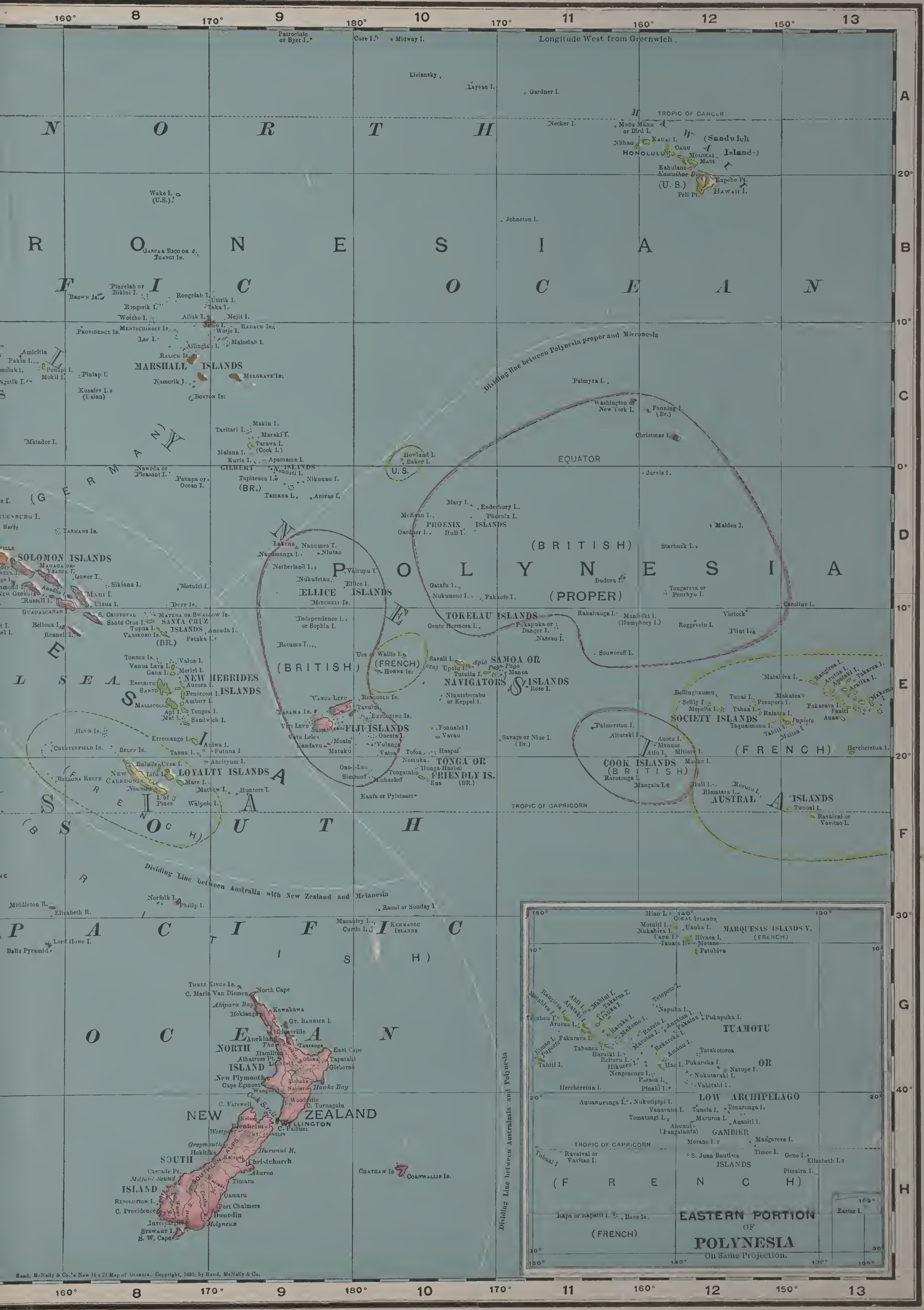
NEW GUINEA D 6
(British Colony)
Area, 90,540 sq. m.
Pop. 350,000

NEW GUINEA D 5
(Dutch Possession)
Area, 151,789 sq. m.
Pop. 200,000

NEW HEBRIDES E 8
(France and Gt. Britain Protect.)
Area 3,500 sq. m.
Pop........ 75,000

NEW SOUTH WALES. G 6
(British Poss.)
Area, 310,700 sq. m.
Pop......1,354,846

NEW ZEALAND H 9
(British Colony)
Area, 104,471 sq. m.
Pop. 772,719



COUNTRIES
(Continued)

QUEENSLAND F 6
(British Poss.)
Area, 668,497 sq. m.
Pop. 496,596

SAMOA ......E 11
(German and U.S. Possession)
Area, 1,701 sq. m.
Pop. 38,412

SANTA CRUZ E 8
(British Colony)
Area.. 360 sq. m.
Pop..... . 5,000

SOCIETY ISLANDS..E 12
(French Protectorate)
Area 1,412 sq. m.
Pop. 25,050

SOLOMON ISLANDS. D 8
(German Protectorate)
Area, 9,000 sq. m.
Pop. ..... .89,000

SOUTH AUSTRALIA..F 5
(British Poss.)
Area, 903,690 sq. m.
Pop. 362,604

TASMANIA H 6
(British Poss.)
Area 26,215 sq.m.
Pop. 172,475

TONGA......F 10
(British Protectorate.)
Area. 374 sq. m.
Pop. 17,500

TUAMOTU AND GAMBIER ISLANDS .G 12
(French Colony)
Area...390 sq. m.
Pop..... 5,250

VICTORIA . G 6
(British Poss.)
Area.87,884 sq.m.
Pop. 1,201,070

WAKE .. ...B 8
(U. S. Poss.)

WALLIS ISLANDS.E 10
(French Colony)
Area....40 sq. m.
Pop. 4,500

WESTERN AUSTRALIA.F 4
(British Poss.)
Area, 975,920 sq. m.
Pop. 184,124

CHIEF CITIES.

Pop.—Thousands.

494 Melbourne G 6 (including suburbs)
488 Sydney.. G 7 (including suburbs)
162 Adelaide. G 5 (including suburbs)
119 Brisbane F 7 (including suburbs)
44 Wellington H 9
39 Honolulu. H 4
36 Perth .G 3 (including suburbs)
31 Auckland G 9
26 Launceston H 6
25 Dunedin . M 5
25 Hobart. H 6
24 Fremantle G 3 (including suburbs)
18 Christchurch H 9
14 Newcastle G 7
12 Geelong .G 6
12 Rockhampton..F 7
11 Goulburn G 6
9 Bathhurst. G 6
9 Napier G 9
9 Maryborough F 7
9 Townsville E 6
7 Noumea (Port de France) H 2
4 Hilo ....H 5
3 Geraldton .F 3
2 Gawler.....G 5
2 Kapunda .. G 5
1 Richmond G 7
1 Brighton H 6
1 Port Augusta G 5
1 Port Moresby D 6

AUSTRALIA

British Colony
Ar. 2,972,906 sq. m.
Pop. 3,771,715

STATES.

New South Wales ... H 5
Ar., 310,700 sq. m.
Pop. 1,354,846

Victoria .... G 6
Area, 87,884 sq. m.
Pop. 1,201,070

Queensland ... G 3
Ar., 668,497 sq. m.
Pop. 496,596

South Australia E 4
Ar., 903,690 sq. m.
Pop. 362,604

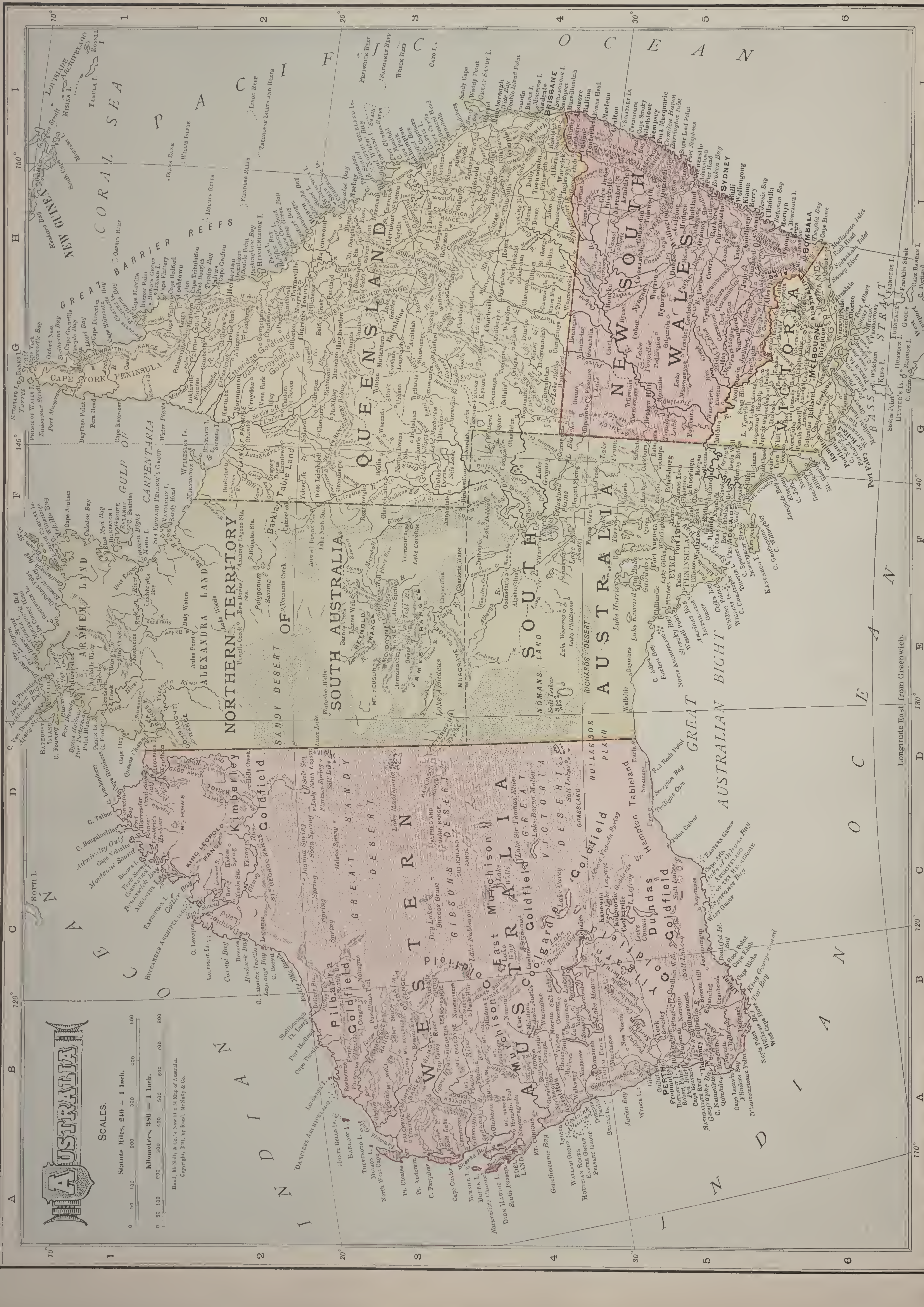
Western Australia C 4
Ar. 975,920 sq. m.
Pop. 184,124

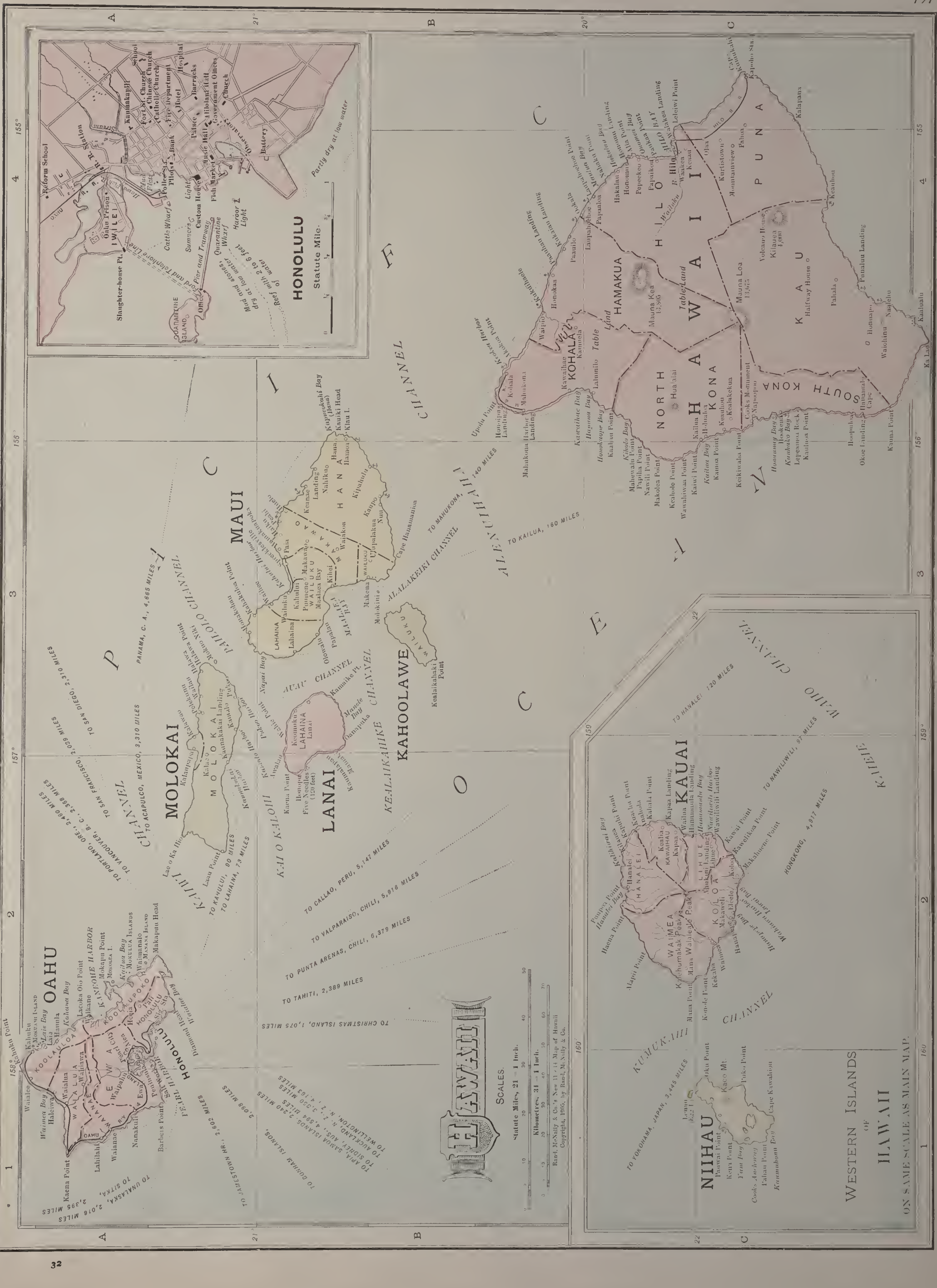
Tasmania
Area, 26,215 sq. m.
Pop. 172,475

CHIEF CITIES.

Pop.—Thousands

491 Melbourne ... G 6 (inc. suburbs)
488 Sydney ... I 5 (inc. suburbs)
162 Adelaide ... F 5 (inc. suburbs)
119 Brisbane ... I 4 (inc. suburbs)
36 Perth ...... A 5 (inc. suburbs)
31 Bendigo .. G 6
28 Broken Hill ... G 5
25 Ballarat ... G 6
24 Fremantle A 5 (inc. suburbs)
20 Port Adelaide ... F 5
18 Unley ..... F 5
18 Kalgoorlie C 4
15 Rockhampton ... I 3
14 Toowoomba ... I 4
14 Newcastle I 5
13 Parramatta ... I 5
13 Kanowna .. C 5
12 Geelong ... G 6
12 Townsville ... H 2
12 Gympie .... I 4
11 Goulburn. H 5
10 Maryborough ... I 4
10 Brighton .. H 6
9 Bathurst .... I 5
9 Ipswich ..... I 4
8 Eaglehawk. G 6
8 Port Pirie .. F 5
6 Warrnambool ... G 6
6 Mt. Morgan I 3
6 Hamilton ... I 5
6 Albury ..... H 5
6 Tamworth .. I 5
6 Maryborough ... G 6
6 Castlemaine ... G 6
6 Charters Towers .. H 2
5 Stawell ..... G 6
5 Lithgow .... I 5
5 Bundaberg I 3
5 Wagga-Wagga ... H 5
5 Singleton ... I 5
4 Lismore ..... I 4
4 Forbes ..... H 5
4 Armidale ... I 5
4 Grafton .... I 4
4 Hamilton G 6
4 Mackay ... H 3
4 Coolgardie . C 4
4 Korumburra ... H 6
4 Orange .... H 5
4 Echuca ..... G 5
4 Glenelg .... F 5
4 Mildura .... G 5
4 Warwick ... I 4
4 St. Arnaud G 5
4 Albany ..... B 5
4 Ararat ..... G 6
4 Wollongong I 5
4 Wallaroo ... F 5
3 Sale .... H 6
3 Dubbo ..... H 5
3 Cobar ...... H 5
3 Inverell ..... I 4
3 Gawler ..... F 5
3 Parkes ..... H 5
3 Mount Gambier ... G 6
3 Croydon ... G 2
3 Creswick .. G 6
3 Hay .... G 5
3 Bairnsdale. H 6
3 Benalla .... H 5
3 Bunbury ... B 5
3 Glen Innes. I 4
3 Young ..... H 5
3 Wellington H 5
3 Cudgegong . I 5
3 Moree ...... H 4
3 Herberton . H 2
3 Mudgee ..... I 5
3 Horsham .. G 6
3 Deniliquin G 5
3 Tenterfield. I 4
3 Geraldton .. A 4
3 Kooringa .. F 5
3 Ravenswood ... H 2
3 Bulli .... I 5
3 Menzies .... C 4
3 Nowra ...... I 5
3 Petersburg F 5
3 Warracknabeal ...... G 5
2 Barcaldine G 3
2 Cairns ..... H 2
2 Seymour. . H 6
2 Cootamundra ... H 5
2 Adamstown I 5
2 Roma ... H 4
2 Port Augusta ... F 5
2 Kempsey ... I 5
2 Narrabri ... I 4
2 Sandgate .. I 4
2 Narandera H 5
2 Yass .... H 5
2 Bourke .... H 4
2 Junee . H 5
2 Portland . G 6
2 Camperdown ... G 6
2 Corowa .... H 5





HAWAII

(United States Dependency)

Area sq. m. 6,449
Pop. . . 154,001

DISTRICTS

Ewa	A 1
Hamakua	C 4
Hana	B 3
Hanalei	C 2
Hilo	C 4
Honolulu	A 2
Kau	C 4
Kawaihau	C 2
Kohala	B 4
Koloa	C 2
Koolauloa	A 2
Koolaupoko	A 2
Lahaina	B 3
Lihue	C 2
Makawao	B 3
Molokai	A 2
North Kona	C 4
Puna	C 4
South Kona	C 4
Waialua	A 1
Waianae	A 1
Wailuku	B 3
Waimea	C 2

CHIEF CITIES.

Pop.—Thousands.

39	Honolulu	A 2
4	Hilo	C 4
1	Lahaina	B 3
1	Speckelsville	B 3

Pop.—Hundreds.

6	Kohala	B 4
5	Honomu	C 4
5	Kamuela	B 4
5	Waimea	C 2
4	Heeia	A 2
4	Lihue	C 2
4	Kahuku	A 2
4	Laupahoehoe	C 4
4	Kalaupapa	A 3
4	Wailuku	B 3
4	Kailua	C 4
3	Paia	B 3
3	Ulupalakua	B 3
3	Mahukona	B 4
3	Hana	B 3
3	Pahala	C 4
2	Kahului	B 3
2	Hookena	C 4
2	Koloa	C 2
2	Makawao	B 3
2	Napoopoo	C 4
2	Pearl City	A 2
2	Paauhau	B 4
2	Makena	B 3
2	Olaa	C 4
1	Honokaa	B 4
1	Kekaha	C 2
1	Kukuihaele	B 4
1	Ewa	A 1
1	Hakalau	C 4
1	Hamakuapoko	B 3
1	Hanalei	C 2
1	Hoopuloa	C 4
1	Kamalo	A 3
1	Kawaihae	B 4
1	Kealia	C 2
1	Mana	C 2
1	Paauilo	B 4
1	Waiohinu	C 4
1	Waimanalo	A 2

NEW ZEALAND

(British Colony)
Area, 104,171 sq. m.
Pop. 772,719

PROVINCIAL DISTRICTS.

AUCKLAND E 11
Area, 25,746 sq. m.
Pop. 175,938

CANTERBURY K 6
Area, 11,040 sq. m.
Pop. 143,041

CHATHAM ISLANDS K 12
Area 375 sq. m.
Pop. 207

HAWKES BAY G 11
Area, 1,110 sq. m.
Pop. 35,124

KERMADEC ISLANDS
Area 15 sq. m.
Pop. 8

MARLBOROUGH I 8
Area, 1,753 sq. m.
Pop. 13,326

NELSON J 7
Area, 10,269 sq. m.
Pop. 37,915

OTAGO M 3
Area, 25,487 sq. m.
Pop. 173,145

TARANAKI G 9
Area, 3,308 sq. m.
Pop. 37,855

WELLINGTON G 10
Area, 11,003 sq. m.
Pop. 141,354

WESTLAND K 5
Area, 1,641 sq. m.
Pop. 14,506

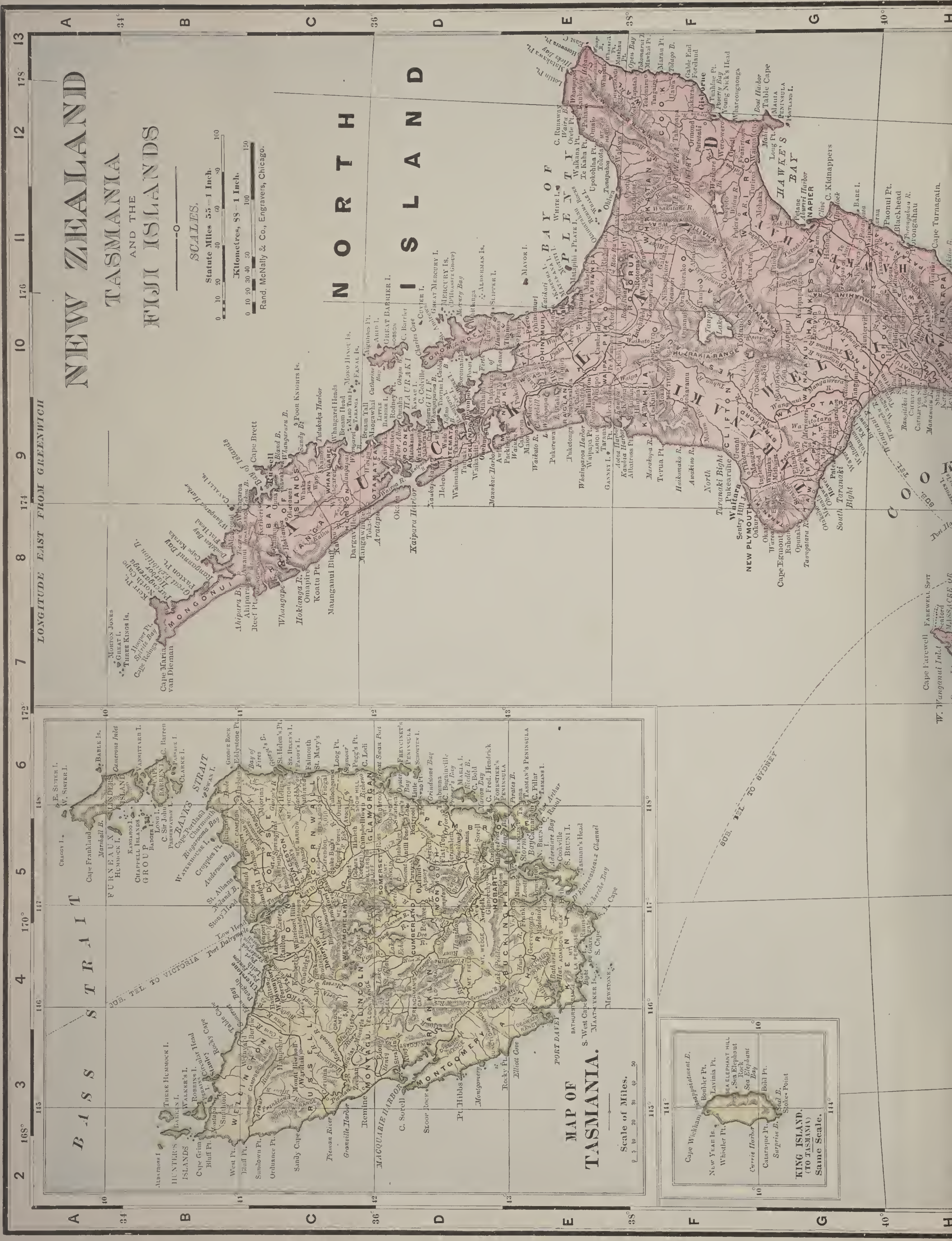
CHIEF CITIES.

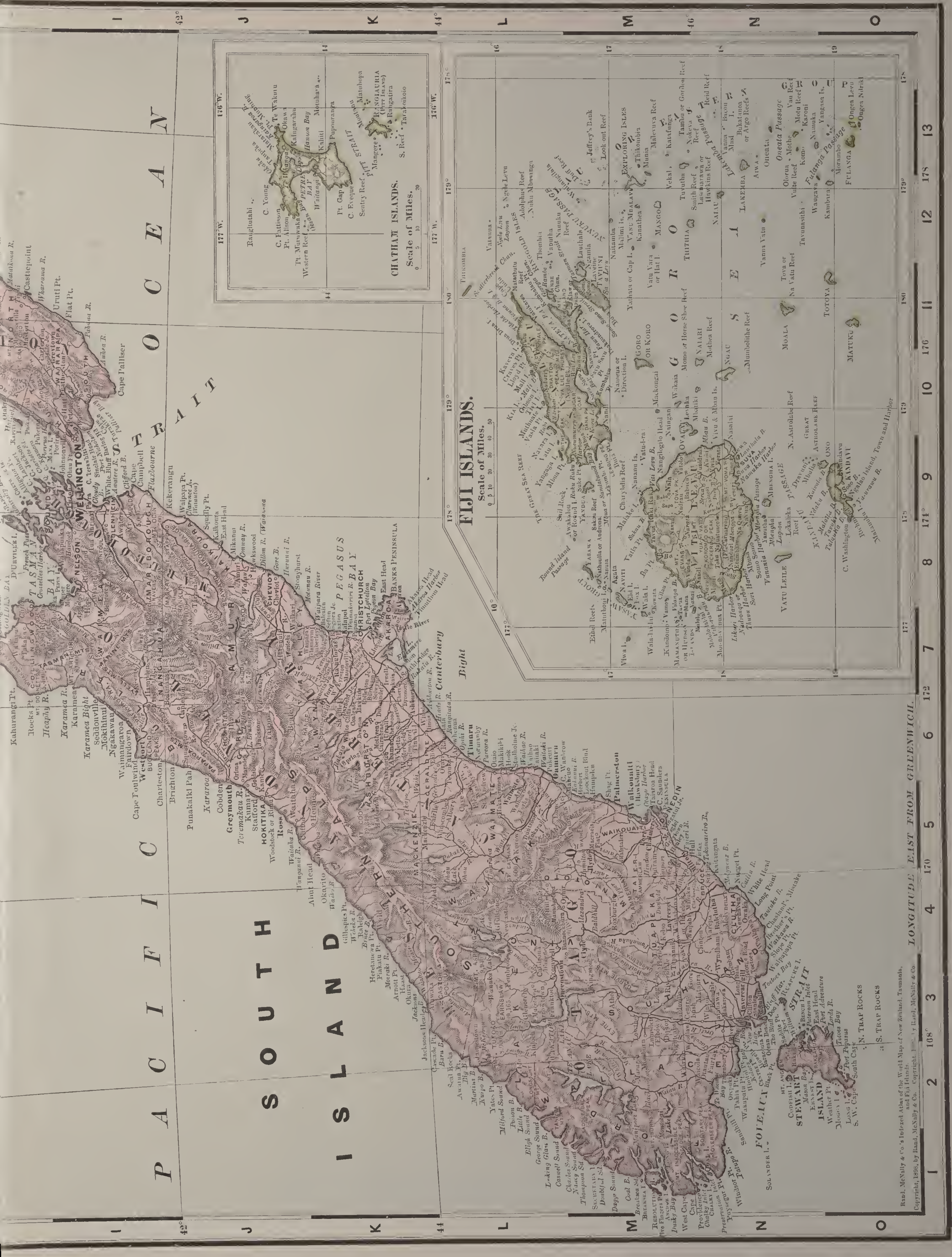
Pop.—Thousands.

44 Wellington I 9
31 Auckland D 9
25 Dunedin M 5
18 Christchurch K 7
10 Invercargill N 3
9 Napier G 12
7 Wanganui G 10
7 Nelson I 8
7 Palmerston H 10
6 Timaru L 6
5 Oamaru M 6
4 New Plymouth G 8
4 Lyttelton K 7
4 Thames E 10
4 Masterton H 10
4 Devonport D 9
4 Petone I 10
4 Greymouth J 5
4 Hastings G 11
3 Blenheim I 8
3 Onehunga D 9
3 Westport I 6
3 Gisborne F 13
2 Gore N 3
2 Ashburton K 6
2 Dannevirke H 11
2 Feilding H 10
2 Hawera G 9
2 Port Chalmers M 5
2 Stratford G 9
2 Coromandel D 10
2 Hokitika J 5
2 Hutt I 10
2 Kaiapoi K 7
2 Rangiora K 7
2 Otahuhu D 10
2 Reefton J 6
2 Brunner J 6
2 Greytown M 5
1 Temuka L 6
1 Kaitangata N 5
1 Mosgiel M 5
1 Whangarei C 9
1 Campbellton N 3
1 Waimate L 5
1 Hamilton E 10
1 Milton N 4
1 Foxton H 10
1 Carterton I 10
1 Cheviot J 8
1 Pukehohe E 10
1 Lawrence M 4
1 Greytown I 10
1 Kumara J 5
1 Marton H 10
1 Waipawa N 4
1 Mauriceville H 10
1 Balclutha N 4
1 Inglewood G 9
1 Norsewood H 11
1 Waipu D 9
1 Cambridge E 10
1 Geraldine L 6

Pop. Hundreds.

9 Tauranga E 11
9 Woodville H 11
9 Te Aroha E 10
9 Motueka I 7
9 Leeston K 7
9 Picton I 9
9 Mataura N 3
8 Otaki H 10
8 Riverton N 3
8 Alexandra M 4
8 Gambale J 8
8 Orepuki N 2
8 Hunterville G 10
8 Paeroa E 10
8 Waikouaiti M 5
7 Palmerston M 5
7 Fairlie L 5
7 Featherston I 10
7 Clive G 12
7 Wakefield I 8
7 Patea G 9
7 Hawksbury M 5
7 Queenstown M 3





Pop.—Hundreds.

6 Cromwell L 4
6 Opotiki F 12
6 Ross J 5
6 Belfast K 7
6 Clyde G 12
6 Dargaville C 8
6 Huntley E 10
6 Lincoln K 7
6 Owaka N 4
6 Waikari K 7
6 Wairoa G 12
6 Waitara F 9
6 Helensville D 9
6 Akaroa K 8
5 Waipukurau H 11
5 Richmond I 8
5 Tinwald K 6
5 Bulls H 10
5 Aratapu D 8
5 Naseby M 5
5 Kaihu C 8
5 Methven K 6
5 Ormondville H 11
5 Pleasant Point L 6
5 Southbridge K 7
5 Washdyke Junction L 6
5 Johnsonville I 9
5 Wyndham N 4
5 Papanui K 7
5 Roxburgh M 4
5 Eketahuna H 10
5 Clinton N 4

TASMANIA

(British Colony)

Area 26,215 sq. m.
Pop. 172,475

COUNTIES.

Arthur F 4
Buckingham E 4
Cornwall C 5
Cumberland D 4
Devon C 4
Dorset C 5
Franklin D 3
Glamorgan C 6
Kent E 4
Lincoln C 4
Monmouth D 5
Montagu C 3
Montgomery D 3
Pembroke D 5
Russell C 3
Somerset D 5
Wellington B 3
Westmoreland C 4

CHIEF CITIES.

Pop.—Thousands.

25 Hobart E 5
21 Launceston C 5
4 Beaconsfield C 5
2 Newtown D 5
2 Mount Bischoff C 3 (Waratah)
2 Campbell town C 5
2 Burnie C 3
1 Westbury C 4
1 Ulverstone C 4
1 Longford C 5
1 New Norfolk D 4
1 Franklin E 4
1 Strahan D 3

Pop.—Hundreds.

9 Deloraine C 4
8 Wynyard B 3
8 Ringarooma B 5
7 Penguin C 4
6 Bellerive E 5
6 Geevestown E 4
6 Ellesmere C 5
5 Evandale C 5
5 Evandale C 5
5 Perth C 5
5 St. Helens C 6
5 Fingal C 6
4 Kempton D 5
4 Gladstone B 6
4 Stanley B 3
4 Ross D 5
4 Richmond D 5
4 Kingston E 5
4 Hamilton D 4
3 Jerusalem D 5
3 Marga e E 5
3 Sorell D 5
3 Swansea D 6
3 St. Marys C 6
3 Railton C 4
3 Smithton B 3
2 Triabunna D 6
2 Buckland D 5
2 Cleveland C 5
2 Falmouth C 6
2 Moorina C 6
1 Breadalbane C 5
1 Bicheno C 8
1 Gordon E 5
1 Remine C 3

FIJI ISLANDS

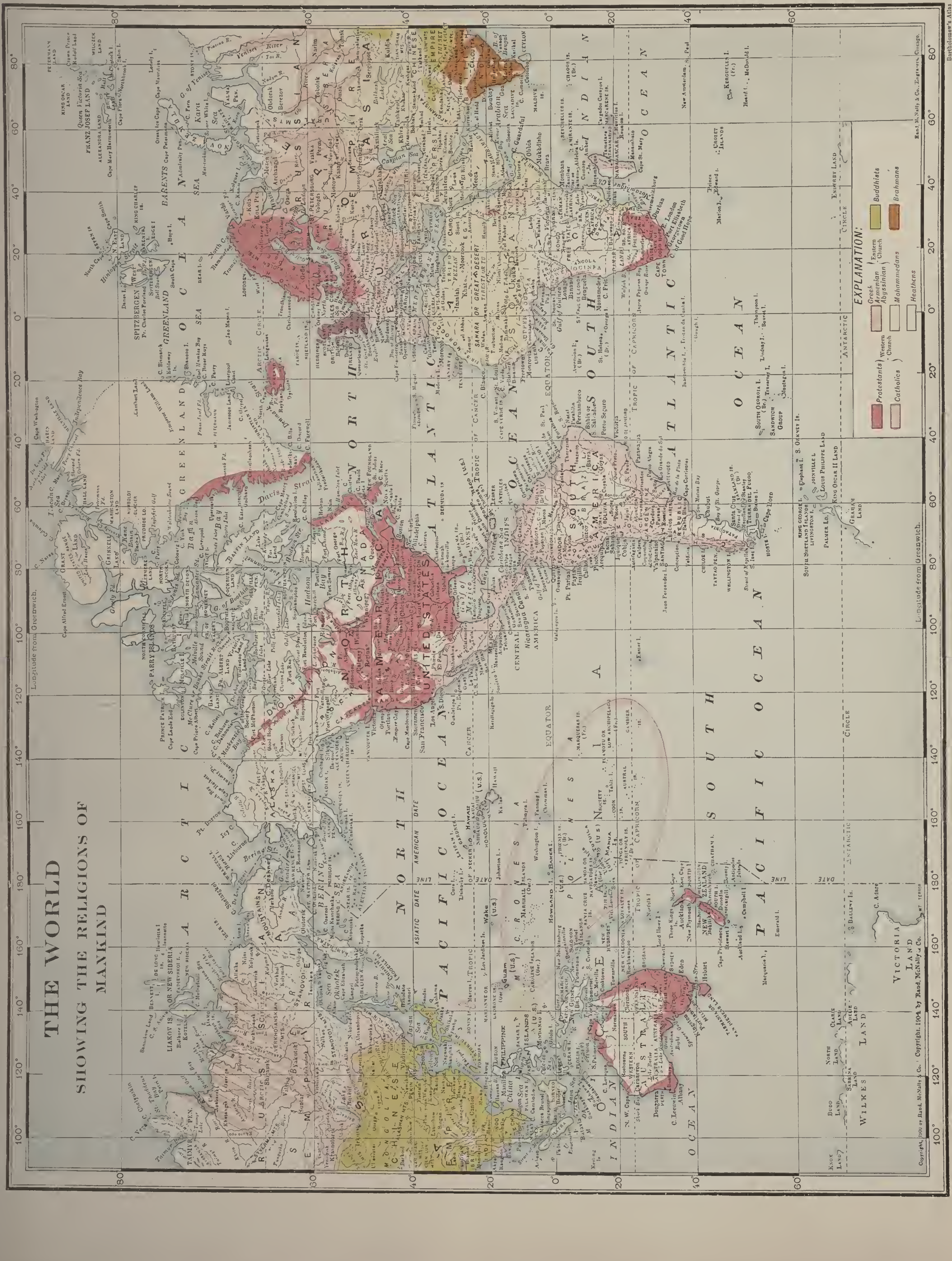
(British Colony)

Area, 8,045 sq. m.
Pop. 120,124

CHIEF CITY.

Pop. Thousands

1 Suva N 9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Greek
Armenian
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Eastern Church
Mohammedans
Heathens
Buddhists
Brahmans
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